

CORPORATION OF THE  
TOWNSHIP OF BILLINGS

AGENDA

March 2, 2021 7:30 p.m.

Electronic Meeting

1. OPEN
2. APPROVAL OF AGENDA
3. DISCLOSURE OF PECUNIARY INTEREST
4. ADOPTION OF MINUTES                      a) February 16, 2021 regular meeting
5. DELEGATIONS
6. COMMITTEE REPORTS                      a) S. Jackson - Roma Report  
                                                            b) S. Alkenbrack - EDC report
7. OLD BUSINESS
8. NEW BUSINESS                      a) COVID-19 response update  
                                                            b) Manitoulin Streams- Donations  
                                                                    and Donor Recognition  
                                                            c) Official Plan Reserve Funds  
                                                            d) 2020 Budget Surplus  
                                                            e) AMO Aug. 15-18 (virtual)  
                                                            f) By-Law 2021-08 Salary Grid  
                                                            g) By-Law 2021-09 Tax Ratio  
                                                            h) Parks Recreation and Wellness  
                                                                    Recommendations to Council  
                                                            i) Summer Students  
                                                            j) Healthy Communities Funding  
                                                            k) By-Law 2021-10 Coyote  
                                                                    Compensation By-Law  
                                                            l) Billings Promotional Strategy
9. CORRESPONDENCE
10. INFORMATION

- a) Parks, Recreation and Wellness  
draft minutes from the February  
22, 2021 meeting
- b) Economic Development  
Committee draft minutes from  
February 17, 2021 meeting
- c) Phase II Environmental Report
- d) 2020 Water Treatment Plant  
Minutes (OCWA)
- e) ORV Guidance Document

11. ACCOUNTS FOR PAYMENT

12. CLOSED SESSION

- a) Identifiable Individual

13. CONFIRMING BY-LAW

14. ADJOURNMENT

# Memorandum

To: Mayor and Council,  
cc: Staff, Public  
From: Kathy McDonald  
Date: February 25, 2021

**RE: March 2, 2021 Council Meeting**

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## 5. Delegations

None

## 6. Committee Reports

### a) S Jackson

Report from the ROMA virtual conference that she attended January 25 and 26 2021.

### b) S Alkenbrack

Report from the Economic Development Committee meeting February 17, 2021.

## 7. Old Business

None

## 8. New Business

### a) COVID-19 Response Update

Presented by Megan Bonenfant, CEMC

### b) Manitoulin Streams Correspondence

Request for permission to install a donor recognition type plaque or display.

#### **Recommendation:**

That Council permit Manitoulin Streams to install a donor recognition type of plaque or display and proceed with fundraising.

### c) Official Plan Reserve Funds

The Planning Board is requesting to use Official Plan reserve funds toward a new project.

#### **Recommendation:**

That Council supports the recommendation from the Manitoulin Planning Board to use the Official Plan reserve funds for a new project.

d) 2020 Budget Surplus

Yearly Council passes a resolution to allow any surplus money from the 2020 budget to be moved to general surplus. In 2020 we budgeted for a new plow truck, which delivery has been delayed due to COVID-19. We did not spend the signage budget as well as other pre-covid planned items. We are expecting the truck to be delivered sometime in March.

**Recommendation:**

That Council approves the transfer of the 2020 surplus into general reserves.

e) AMO Conference August 15- 18 2021

AMO (Association of Municipalities of Ontario) will again be holding the Annual Conference virtually. The dates for the Conference are August 15 to 18, 2021. The early bird deadline is in April so in order to save as few dollars Council should consider whether or not they wish to attend.

**Recommendation:**

That Council pass a resolution naming the Councillors that wish to be registered for the AMO Conference.

f) By-Law 2021 – 08 Salary Grid

As directed, I have prepared a new by-law for the staff salary grid. There are no actual changes in the pay ranges. Added to the By-law 6. Any employee that is at the top of their category are eligible to receive a bonus based on recommendation by the CAO/Clerk.

**Recommendation:**

That Council give this by-law three readings and enact.

g) By-Law 2021-09 Tax Ratio By-law

This is a procedural by-law completed every year with the only changes being the date.

**Recommendation:**

That Council give this by-law three readings and enacted.

h) Parks Recreation and Wellness Recommendations to Council

The Parks, Recreation and Wellness meeting held February 22, 2021 had three recommendations to be brought to Council. For budget reasons it should be noted that the committee feels that they can raise over \$10,000 in donations for the rink project.

That a recommendation be made to Council to include \$40,000 in the draft 2021 budget for rink repairs.

That a recommendation be made to Council to give permission to the Parks, Recreation and Wellness committee to fundraise for the rink repairs.

That a recommendation be given to Council to approve \$300 for the Easter Egg Event.

i) Summer Students

Attached is a copy of the advertisement that has been prepared for Council approval. An email was sent to Public Works, Library and Museum to confirm that they wanted students for the 2021 season.

We have applied for funding for some of these positions but have yet to receive notice as to whether or not we will receive funding. All of these positions are crucial. The marina students are required to operate the marina, the Library student to run the summer program (COVID pending), the Museum to allow for opening seven days a week and the Public Works students to assist with grounds maintenance and at the landfill.

**Recommendation:**

That Council approve the advertising and hiring of students for the positions listed in the draft advertisement.

j) Healthy Communities Funding

See separate memo attached.

k) By-Law 2021-10 Coyote Compensation By-Law

As directed at the February 16, 2020 meeting staff have prepared a Coyote Compensation By-Law.

**Recommendation:**

That Council give by-law 2021-10, being a by-law to implement a Coyote Compensation program be given three readings and enacted.

l) Billings Promotional Strategy

During the Economic Development meeting there was discussion regarding Billings Promotional Strategy. A recommendation was made to request that the Township hire Kendra Edwards to design a new brochure.

**Recommendation:**

That Council directs staff to engage with Kendra Edwards Design, as designer of the existing brochure/map, to discuss revisions and updates for 2021, and that Council consider inclusion of expenditure on this item in the 2021 budget.

**9. Correspondence**

None

**10. Information**

There are a number of items attached for Council's information. Council may move any of these to New Business during the agenda approval for discussion at this meeting or request that an item(s) be included on a future agenda for discussion.

- a) Parks, Recreation and Wellness draft minutes from the February 22, 2021 meeting
- b) Economic Development Committee draft minutes from February 17, 2021 meeting
- c) Phase II Environmental Report
- d) 2020 Water Treatment Plant Minutes (OCWA)
- e) ORV Guidance Document

**12. Closed Session**

There will be a closed session to discuss a matter pertaining to an identifiable individual.

The Corporation of the  
Township of Billings  
Regular Meeting

February 16, 2021

Electronic Meeting

Present: Mayor Anderson, Councillors Sharon Alkenbrack, Bryan Barker, Michael Hunt and Sharon Jackson

Staff: Floyd Becks, Public Works Superintendent; Todd Gordon, Economic Development Officer; Kathy McDonald, CAO/Clerk; Arthur Moran, By-law Officer

Media: Tom Sasvari

Members of the Public

Regrets: None

**1. Open**

**2021-50 Barker - Hunt**

BE IT RESOLVED that this regular meeting of council be opened with a quorum present at 7:30 p.m. with Mayor Anderson presiding.

Carried

**2. Approval of the Agenda**

**2021-51 Alkenbrack - Jackson**

BE IT RESOLVED that the agenda for the February 16, 2021 regular meeting of council be accepted as presented.

Carried

**3. Disclosure of Pecuniary Interest**

The following pecuniary interest declarations were made:

I, Councillor Ian Anderson, declare a potential direct pecuniary interest on Agenda Item No. 7(b) title Coyote Compensation for the following reason: I am a licensed fur harvester and could benefit from the compensation program.

I, Councillor Bryan Barker, declare a potential pecuniary interest on agenda item 7 (c) item title Farm Animal Exemption Request for the following reason: Although I am not sure this fits the definition of pecuniary interest I would like to err on the side of caution and declare a conflict as I have a few chickens for personal egg collection.

**4. Adoption of Minutes**

**a) February 2, 2021**

**2021-52 Hunt – Alkenbrack**

BE IT RESOLVED that Council accepts the minutes of the February 2, 2021, regular meeting as presented.

Carried

**b) February 9, 2021**

**2021-53 Barker – Jackson**

BE IT RESOLVED that Council accepts the minutes of the February 9, 2021, special meeting as presented.

Carried

**5. Delegations**

None

**6. Committee Reports**

None

**7. Old Business**

**a) Power of Entry**

**2021-54 Barker – Alkenbrack**

BE IT RESOLVED that by-law 2020-47 be given third reading and enacted.

**DEFEATED**

Mayor Anderson vacated the Chair and Councilor Barker proceeded as Chair.

Mayor Anderson left the meeting as he had declared a conflict of interest the item 7.b).

**b) Coyote Compensation**

No resolution. CAO/Clerk was provided with directions to prepare a by-law to provide for the control of nuisance wolves and coyotes.

Mayor Anderson returned to the meeting.

Councillor Barker vacated the Chair and Mayor Anderson returned to Chair the meeting.

Councillor Barker declared a conflict of interest and left the meeting as he had declared a conflict of interest in item 7.c)

**c) Farm animal exemption request**

**2021-55 Alkenbrack – Jackson**

BE IT RESOLVED that Council denies the Rickards's request for an exemption to by-law 2013-27, to allow for the keeping of a goat on a Shoreline Residential property.

**DEFEATED**

**2021-56 Alkenbrack – Jackson**

BE IT RESOLVED that Council directs the CAO/Clerk to enter into an agreement with the Sean Rickard to allow for a conditional exemption to By-Law 2015-03 for the purpose of keeping a myotonic goat at 566 Maple Point Rd.

Carried

**d) Bridge Remediation**

Council was updated on the discussion that the Public Works Superintendent had with the engineer from K. Smart Associates regarding the 2020 Structural Inspection Appraisal Report.

**e) Kagawong Drinking Water Inspection Report 2020-2021**

**2021-57 Hunt – Alkenbrack**

BE IT RESOLVED that Council receives the Kagawong Drinking Water Inspection report 2020-2021.

Carried

**f) Gore Bay Medical Centre ad hoc Committee representation**

**2021-58 Alkenbrack – Hunt**

BE IT RESOLVED that Council appoints Sharon Jackson to the Gore Bay Medical Centre ad hoc Committee.

Carried

**g) Zoning Update Steering Committee**

**2021-59 Barker – Alkenbrack**

BE IT RESOLVED THAT Council appoints Todd Gordon to the Zoning By-law Update Steering Committee.

Carried

**h) Kagawong Landfill ECA Application report**

**2021-60 Alkenbrack – Hunt**

BE IT RESOLVED that Council authorizes the Mayor and CAO/Clerk to proceed with the Kagawong Landfill ECA application as detailed in the Pinchin Kagawong Landfill ECA Application Supporting Documentation report issues on February 5, 20201 and execute any necessary documents for that purpose.

Carried

**i) Municipal Insurance Rates**

Council received the information.

**j) Employee Salary grid review**

The CAO was provided with direction regarding the Employee Salary by-law.

**k) Custodian position**

**2021-61 Barker – Alkenbrack**

BE IT RESOLVED that Council authorizes the CAO/Clerk to hire Justin McVey to the Custodian position.

Carried

**l) Parks, Recreation and Wellness Committee Application**

**2021-62 Jackson – Hunt**

BE IT RESOLVED that Council appoints Andrew Preyde to the Parks, Recreation and Wellness Committee.

Carried

**9. Correspondence**

**a) Manitoulin Family Resources re: Christmas basket campaign contribution**

Council received the letter.

**b) Gore Bay Provincial Offenses Board of Management re: COVID support**

**2021-63 Barker – Jackson**

BE IT RESOLVED that Council for the Township of Billings supports the Gore Bay Provincial Offenses Board of Management in their request to the provincial government to provide financial support (COVID) for all POA court operations in the province; and



BE IT FURTHER RESOLVED that a copy of this resolution be sent to the Premier, the Attorney General, MPP Michael Mantha and the Gore Bay Provincial Offenses Board of Management.

Carried

**c) Township of Asphodel-Norwood re: Community Safety and Wellbeing Plan extension**

**2021-64 Alkenbrack – Jackson**

BE IT RESOLVED that Council for the Township of Billings joins the Township of Asphodel-Norwood in calling upon the Solicitor General to review the imposed deadline for municipalities to complete and adopt a Community Safety and Well-Being (CSWB) Plan in consultation with local governments to address the unique challenges facing individual regions; and,

BE IT FURTHER RESOLVED that a copy of this resolution be sent to the Solicitor General, the Minister of Community Safety and Correctional Services, MPP Michael Mantha and the Township of Asphodel-Norwood.

Carried

**d) City of St. Catharines re: universal paid sick leave**

**2021-65 Jackson – Alkenbrack**

BE IT RESOLVED that Council for the Township of Billings joins the City of St. Catharines in endorsing legislated sick leave and calls on the government of Ontario to permanently legislate universal paid sick days for all workers in Ontario during the pandemic and beyond, regardless of workplace size, type of work or immigration status; and

BE IT FURTHER RESOLVED that this motion be forwarded to the Premier of Ontario, Minister of Labour, MPP Michael Mantha, and the City of St. Catharines.

Carried

**e) Save the Ontario Fire College re: Ontario Fire College closure**

**2021-66 Hunt – Barker**

WHEREAS the Ontario Fire College Campus has been in operation in Gravenhurst since 1958; and

WHEREAS THE Ontario Fire College Campus is one of the primary sources of certified training for Ontario Fire Fighters; and

WHEREAS the Ontario Fire College Campus has built a reputation of integrity, credibility, and reliability in providing some of the best training to our Fire Services within the Province of Ontario; and

WHEREAS the Ontario Fire College Campus has been used to train and certify both Volunteer, Part-Time and Career firefighters throughout Ontario; and

WHEREAS the Regional Training Centers are not all created equal and similar in function to the Ontario Fire College Campus; and

WHEREAS the Ontario Fire College Campus gives Ontario Firefighters another option other than Regional Training Centers to obtain National Fire Protection Association (NFPA) certifications; and

WHEREAS the Ontario Fire College Campus is most cost-effective method for municipalities to certify Firefighters to NFPA Standards in Ontario; and

WHEREAS the Ontario Government enacted and revoked O. Reg. 379/18: Firefighter Certification 2018, and

WHEREAS the Ontario Government revoked O. Reg 379/18: Firefighter Certification, it was made known by the Office of the Solicitor General that the act would be amended and brought back in the future; and

THEREFORE, BE IT RESOLVED that the Township of Billings requests that the Province of Ontario reverse their decision to close the Ontario Fire College Campus in Gravenhurst as the OFC is one of the best and most cost-effective methods for municipalities to train their firefighters which assists us in protecting our residents; and

BE IT FURTHER RESOLVED that this Resolution is forwarded to the Honourable Doug Ford Premier of Ontario, the Honorable Sylvia Jones Ontario Solicitor General, the Honourable Steve Clark, Minister of Municipal Affairs and Housing, the Ontario Fire Marshal Jon Pegg, and the Save the Ontario Fire College group.

Carried

**f) Township of Terrace Bay re: tax rate for railway rights-of-way**

Council received the correspondence.

**10. Information**

**a) MPAC quarterly report – 2020 Q4.**

Council received the report

**b) Manitoulin Municipal Association meeting package – February 17, 2021**

Council received the information.

**c) Minutes – Economic Development Committee December 9, 2020**

Council received the minutes.

**11. Accounts for Payment**

**2021-67 Alkenbrack - Hunt**

BE IT RESOLVED that Council authorizes the following accounts for payment:

General Accounts           \$173,193.47

and that cheque numbers 6622, 6627 to 6644 be authorized for signing as described in the attached register.

Carried

**12. Closed Session**

**2021-68 Barker – Alkenbrack**

BE IT RESOLVED that in accordance with Section 239(2) (d) of the Municipal Act, 2001 S.O. Chapter 25, this Council proceed to a Closed Session at 9:32 p.m. in order to discuss an item related to employee negotiations.

Carried

2021-69 Resolution passed in camera to provide direction to the CAO.

**2021-70 Alkenbrack – Jackson**

BE IT RESOLVED that Council move out of Closed Session at 9:35 p.m. and resume our regular, open meeting.

**13. Confirming By-Law**

**2021-71 Alkenbrack - Barker**

BE IT RESOLVED that by-law 2021-07, being a by-law to confirm the proceedings of Council, be given first, second and third reading and enacted.

Carried

**14. Adjournment**

BE IT RESOLVED that this regular meeting of council be adjourned at 9:37 p.m.

Carried

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Ian Anderson, Mayor

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Kathy McDonald, CAO/Clerk

02/18/21:km

## MEMORANDUM

To: Council and staff  
Date: February 1, 2021

From: Sharon Jackson, Council  
Re: ROMA Conference update

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The annual ROMA (Rural Ontario Municipalities Association) conference was held January 25 & 26, 2021. During the two days of guest speakers, minister's forums and concurrent sessions. Topics covered included:

Broadband

Flooding

Seniors services and aging in rural communities

Community wellness and Well being plans

Waste: full producer responsibility

OPP matters

Municipal impact of cannabis growing

Digital government and virtual meetings

Community paramedicine

Impact and explicit bias

**Chief Stacey Laforme**, elected Chief of the Mississaugas of the New Credit First Nation (MNCFN) welcomed delegates to the annual conference. His message to those in attendance was to come together with a clear mind, a pure heart and the courage to use both to do the right thing. The world is changing, he shared, and it can be better if we understand how to move forward together. The pandemic has taught us what is important.

Opening keynote speaker on the first day of the conference was **Chantal Hebert**, national affairs writer for the *Toronto Star*, guest for the magazine *L'Actualite* and a regular commentator on *CBC's The National's weekly At Issue* panel. She began with "we know it will end, but no idea when" referring to the **Pandemic** and how our governments have reacted. It was a health crisis first and then economic. From day one, there was agreement of all politicians that this was a real crisis: unprecedented government action i.e., lock down, closing schools and suspending the economy.

Ms Hebert spoke about the **US Canada relations** and feels the mood in Canada is overwhelmingly positive as newly elected President Joe Biden offers normalcy vs incoherence with the climate change front being the biggest change. This is the first time our federal government and the US are aligned on climate change. They are doing more and doing it quickly. The Americans are pushing us to do better.

When asked what she felt were the main policy areas risen due to the Pandemic, Ms Hebert noted that **internet coverage** is as essential as turning on the lights or heating system in our homes. One of the other areas was **long term care** which she refers to as "the orphan file".

Ms Hebert concluded by saying she felt **Premier Doug Ford** made a connection with the people of Ontario during the Pandemic as people's ideals changed, however felt it may not take him past the Pandemic into the election

**ROMA Chair Allan Thompson**, Mayor of the Town of Caledon welcomed delegates to the conference noting the last time we met in person was at the ROMA conference in 2020. Virtual conferences are our “new reality” stressing that the world today is not one we could have imagined a year ago. “A crisis”, he stated, “does not create character, it reveals it”.

He spoke of the main issues facing all municipalities such as rural health related services, the environment and broadband, stressing that our future depends on it to learn, socialize, access economic opportunities, and overcome the distance between rural and urban connectivity which has been desperately needed for “a very long time. The Pandemic has brought it to a head”. The vaccine is the light at the end of the tunnel, he concluded, however “there is still much work to be done”.

Elizabeth McIsaac, president of Maytree, a Toronto based company committed to advancing systemic solutions to poverty and strengthening civic communities spoke on the **Economic Recovery in Rural Ontario**. Some of the topics covered included a conversation about a human rights approach to recovery highlighting housing, jobs, education and food security.

**Andrea Horvath**, Leader of the official opposition (NDP) spoke about broadband, long term care, sick days for workers, and shared that we rise and fall together. She stated, “we will never support downloading more on rural municipalities” and will ensure the province takes on its fair share.

Minister of Health and Deputy Prime Minister **Christine Elliott** provided a Covid-19 update stating that the second wave is not the same as the first in that it is now in our long-term care homes, hospitals and workplaces. Ontario, she stated, could vaccinate more people than the supply provided. There has been a further reduction from Pfizer which has impacted not only Ontario, but Canada and the world.

An interesting and revealing statistic shared by Minister of Seniors and Accessibility **Raymond Cho**: prior to Covid-19 a study of 80,000 seniors reported 80% want to stay and live at home longer if possible. Post Covid-19, the number jumped to 91%.

On the second day of the virtual conference **Mike Schreiner**, leader of the Green Party of Ontario spoke on the long-term care home humanitarian crisis and its threat our most vulnerable. One thing we can all learn from the Pandemic is to “build back smarter” related to physical, mental, environmental and community. The first step is to begin by caring for each other.

He spoke about empowering people to work from home and encourage young people to move to rural areas where they can work remotely from home.

The **Honorable Maryam Monsef**, Minister for Women and Gender Equality and Rural Economic Development spoke about how things have changed since the Pandemic: broadband is the most important. “You needed access yesterday” she noted. During lockdown, Christmas time was the hardest. People learned to use Zoom to stay connected to family and friends. Progress, she noted, is slow. Scandinavia, South Korea and Chile are all ahead of Canada in getting broadband in everyone’s household. When it comes to health and safety, kids, and skills training, we cannot afford to be left behind. Rural recovery starts with broadband. The challenge is funding.

She noted that 60% of rural municipalities have less than five staff members doing the work. Our staff did an amazing job under trying and unprecedented times to ensure there was minimal interruption in services and most importantly, to guarantee the safety of all staff and citizens.

Canadians are tired of waiting. It is 2021 and some areas are still literally cut off from the world. PM Trudeau plans to have 98% online by 2026 and 100% by 2030. Today rural children are struggling to access their virtual education, rural Canadians cannot access resources and programming when it comes to health care including mental health resources. Municipalities are struggling to market themselves for investments when a business cannot operate without basis internet. In the year 2021 when our lives are dependent on a virtual world, what do you say to rural Canadians who are struggling, and area being told "just wait nine more years" when they have already struggled and waited for so long?

## Kathy McDonald

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**From:** Sharon Alkenbrack <alkens@manitoulin.net>  
**Sent:** Tuesday, February 23, 2021 7:47 AM  
**To:** Kathy McDonald  
**Cc:** alkens@manitoulin.net  
**Subject:** Committee report

Kathy, my computer has crashed so sending my EDC committee report for Council on email.

### Committee Report

#### EDC

Meeting date: Feb. 10/21

#### Old Business:

Discussion of the success of the Poetry boxes and now adding Art boxes for this year Todd updated committee on the new flower boxes Social Media workshop postponed until in person can happen, as teaching this course would be easier in person.

Jabbawong Storytelling Festival, just a discussion and waiting for covid relief.

Billings pamphlet, the brochure is moving forward, now getting business information sb ready for spring distribution Old Business:

Continued info from The New local that Todd summarized Winter Tourism: a discussion of the businesses that are open in off season and seeing how busy it's been this year, should we be moving forward on promoting winter Tourism

Sharon A

# **New COVID-19 variants mean stricter self-isolation requirements and enhanced screening for schools**

Issued: Tuesday, February 23, 2021

In response to the need for enhanced protection against the new more transmissible COVID-19 variants of concern (VOC), the Ministry of Health has introduced stricter self-isolation and school screening requirements.

Enhanced self-isolation requirements are in place for all household contacts of individuals who have even one symptom of COVID-19. Under the new guidance, all household members of an individual with even one symptom of COVID-19 are required stay home and self-isolate until the individual with symptoms receives a negative COVID-19 test result or receives an alternate diagnosis by a health care professional. If the individual with symptoms does not seek COVID-19 testing, all household contacts must isolate for 14 days from their last contact with that symptomatic individual.

The provincial COVID 19 self assessment and COVID-19 school and child care screener have been updated to include this change and also require anyone who has a new or worsening symptom of COVID-19—even if only one symptom—to stay home and self-isolate until:

- They receive a negative COVID-19 test result.
- They receive an alternative diagnosis by a health care professional.
- Or it has been 10 days since their symptom started and they are feeling better.

"By taking these additional measures, we can better protect our community from the very real threat posed by COVID-19 variants of concern," said Dr. Penny Sutcliffe, Medical Officer of Health with Public Health Sudbury & Districts. "The success of enhanced public health guidance for screening and self-isolation relies on everyone's cooperation. We recognize the impact these requirements can have on individuals and families, but the consequences of variants of concern gaining a foothold in our communities warrants decisive action. These decisions are not made lightly," added Dr. Sutcliffe.

## **Prevent the spread of COVID-19**

The rate at which these new variants can spread is alarming, so it is more important than ever to contain the virus as much as possible. Through our choices and actions, we can make it much more difficult for COVID-19 to spread. Everyone can recommit to the behaviours that prevent transmission and continue to follow public health guidance.

- Stay home and seek [COVID-19 testing \(https://www.phsd.ca/health-topics-programs/diseases-infections/coronavirus/#testing\)](https://www.phsd.ca/health-topics-programs/diseases-infections/coronavirus/#testing) if you have symptoms, even symptoms are mild.
- All non-essential travel should be avoided. Area residents are being exposed to the virus through travel outside our region. Stay in the area of your home community or stay in the region.



- Get tested (<https://www.phsd.ca/health-topics-programs/diseases-infections/coronavirus/#testing>) for COVID-19 if you have any symptoms.
- The vaccine (<https://www.phsd.ca/health-topics-programs/vaccines-immunizations/coronavirus-covid-19-vaccine/>) is highly recommended for all eligible individuals.
- Learn more about vaccine safety (<https://www.phsd.ca/health-topics-programs/vaccines-immunizations/coronavirus-covid-19-vaccine-faq/>) and make an informed decision to choose to get vaccinated when the time comes.
- Practise physical distancing (<https://www.phsd.ca/coronavirus/social-distancing-covid-19/>), because any close contact could be a possible exposure to COVID-19.
- Continue to work remotely, where possible.
- Masks or face coverings must be worn in all indoor public places in Sudbury and districts.
- Masks or face coverings should also be worn where physical distancing cannot be maintained.
- Wash your hands often and when visibly dirty for 15 seconds.
- Cover your cough or sneeze with your arm or a tissue, throw away the tissue, and wash your hands.
- Avoid touching your eyes, nose, and mouth.
- Monitor for symptoms (<https://www.phsd.ca/health-topics-programs/diseases-infections/coronavirus#symptoms>) of COVID-19.
- Avoid contact with people who are sick.
- Download the COVID Alert app.

For more information or if you have questions, please visit [phsd.ca/COVID-19](https://www.phsd.ca/COVID-19) (<https://www.phsd.ca/health-topics-programs/diseases-infections/coronavirus/>) or call Public Health Sudbury & Districts at 705.522.9200 (toll-free 1.866.522.9200).

This item was last modified on February 23, 2021

**Sudbury**  
705.522.9200

**Chapleau**  
705.860.9200

**Sudbury East**  
705.222.9201

**Espanola**  
705.222.9202

**Manitoulin Island**  
705.370.9200

**Toll-free**  
1.866.522.9200

# Public Health Sudbury & Districts

## Coronavirus Disease 2019 (COVID-19)

### Epidemiology Update

These data are based on information available from Public Health Sudbury & Districts as of **4:00 PM February 21, 2021**, unless otherwise specified.

## Highlights

As of the time of reporting, among residents of the Public Health Sudbury & Districts service area, there have been:

- **583 cases** of COVID-19.
  - 3 of these cases were COVID-19 variants of concern (VOC)
  - As of November 24, 2020, unless otherwise specified, case counts include laboratory confirmed cases as well as probable cases as defined by the Ontario Ministry of Health ([probable case definition \[PDF\]](#)), except for individuals who have a preliminary positive result from a point-of-care test and for whom laboratory confirmation is required.
- **12 deaths**.
  - The *case fatality rate* is 2.1% (i.e.,  $Total\ Deaths / Total\ Cases \times 100\%$ ).
- **174,795 tests** for COVID-19 completed as of end of day on February 20, 2021. Note: this includes preliminary counts of tests completed in the previous 6 days.
  - The *testing rate* is 87,902 tests per 100,000 population.
  - The percent of tests that are positive is 0.4%. (i.e.,  $Total\ Positive\ Tests / Total\ Tests \times 100\%$ ). Note: an individual may have more than one test completed.

Of the cases:

- 559 cases (95.9%) are resolved, and there are 24 active cases (4.1%).
- 227 cases (38.9%) were female. Note: Sex is not specified for cases 19 aged years and under.
- 339 cases (58.1%) were less than 40 years of age. Note: Data on sex and age groups are updated when there are sufficient data to ensure individual cases cannot be identified.
- 92 cases (15.8%) had no known epidemiological link (unknown exposure).
- 110 cases (18.9%) were related to 24 outbreaks in congregate settings. There have been 11 COVID-related deaths in these facilities.
- There have been 7 outbreaks declared in local schools and licensed daycares.

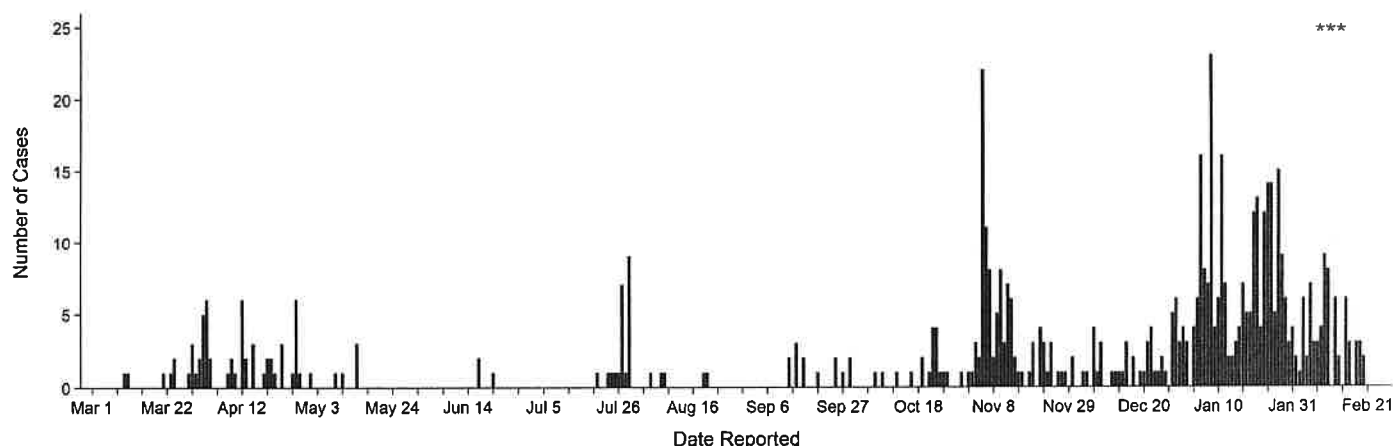
# Epidemiology – Sudbury and Districts

Total cases as of February 21, 2021 at 4:00 PM: **583 Cases**

## Cases over time

Note: External data sources may have slight delays in capturing locally reported cases.

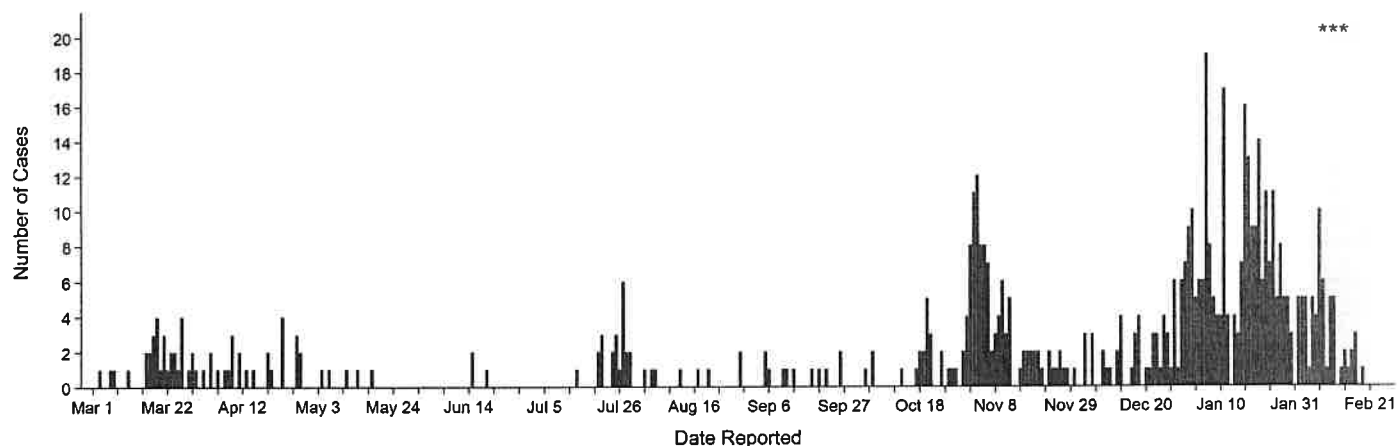
**FIGURE 1. Confirmed cases, by date of reporting, Sudbury and districts**



Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. <https://data.ontario.ca/dataset/confirmed-positive-cases-of-covid-19-in-ontario> (Access Date: February 22, 2021)

\*\*\* Illnesses occurring during this period may not yet be reported

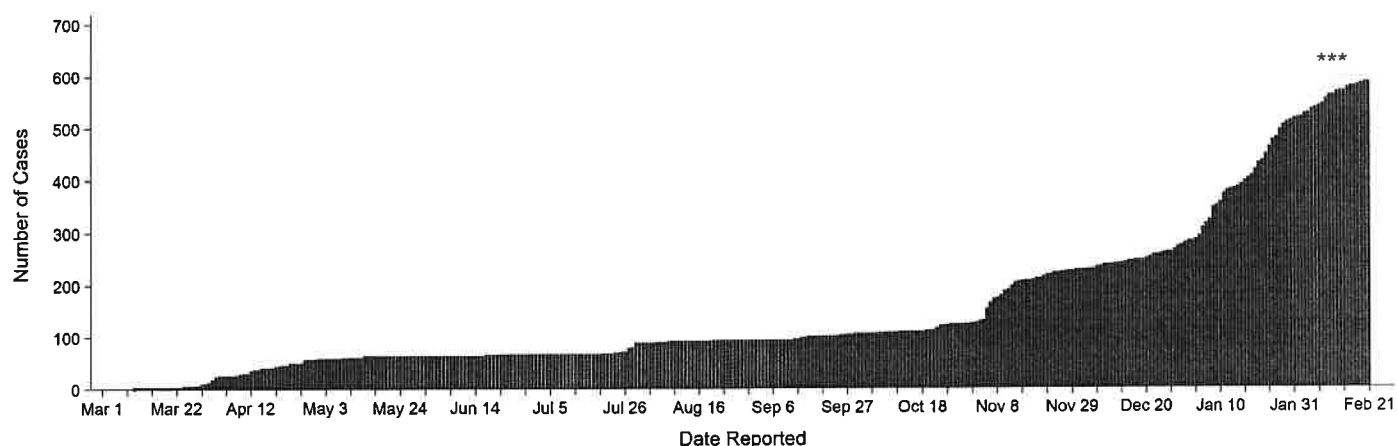
**FIGURE 2. Confirmed cases, by date of symptom onset, Sudbury and districts**



Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. <https://data.ontario.ca/dataset/confirmed-positive-cases-of-covid-19-in-ontario> (Access Date: February 22, 2021)

\*\*\* Illnesses occurring during this period may not yet be reported

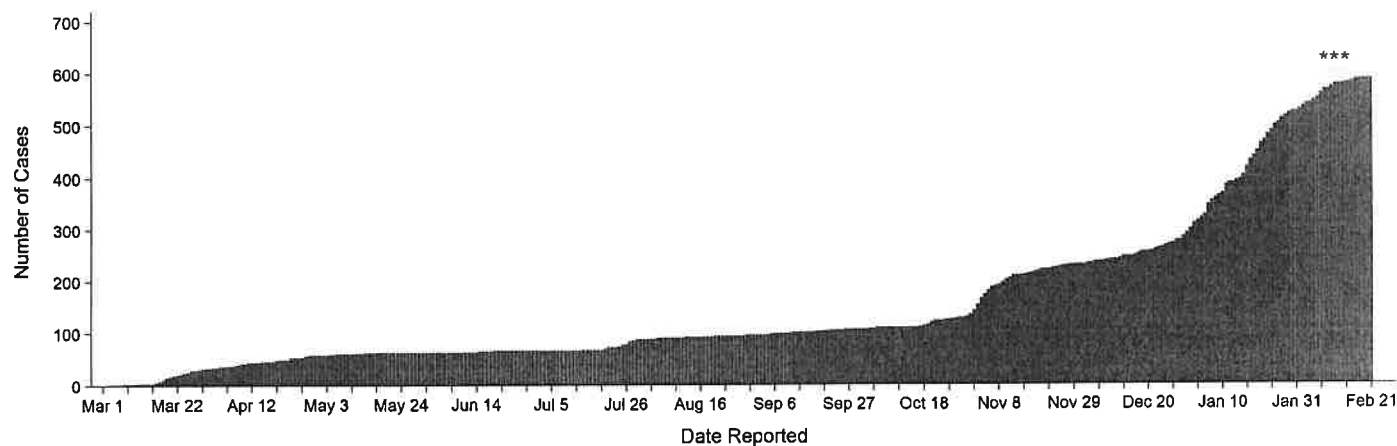
**FIGURE 3. Cumulative confirmed cases, by date of reporting, Sudbury and districts**



Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. <https://data.ontario.ca/dataset/confirmed-positive-cases-of-covid-19-in-ontario> (Access Date: February 22, 2021)

\*\*\* Illnesses occurring during this period may not yet be reported

**FIGURE 4. Cumulative confirmed cases, by date of symptom onset, Sudbury and districts**



Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. <https://data.ontario.ca/dataset/confirmed-positive-cases-of-covid-19-in-ontario> (Access Date: February 22, 2021)

\*\*\* Illnesses occurring during this period may not yet be reported

# Case Characteristics

**TABLE 1. Number and Percentage of Cases, by Various Characteristics**

Characteristic	Cases since March 11	Percentage (%)	Cases - Past week	Percentage (%)
Numbers of Cases	583	100%	17	100%
Change from previous report	8	1.4%*	-12	-41.4%*
COVID-19 Variant of Concern: B.1.1.7†	3	0%	**	**
Sex: Male	226	38.8%	2	11.8%
Sex: Female	227	38.9%	10	58.8%
Sex: Not specified***	130	22.3%	5	29.4%
Ages: 19 and under	132	22.6%	3	17.6%
Ages: 20-39	207	35.5%	3	17.6%
Ages: 40-59	115	19.7%	6	35.3%
Ages: 60-79	70	12.0%	2	11.8%
Ages: 80 and over	57	9.8%	1	5.9%
Ages: Not specified***	2	0.3%	2	11.8%
Area: Greater Sudbury	541	92.8%	17	100.0%
Area: Manitoulin District	24	4.1%	0	0.0%
Area: Sudbury District	18	3.1%	0	0.0%

Data source: Public Health Sudbury & Districts

\*Percent change represents the degree of change over time, calculated: (New-Original)/Original

† The COVID-19 variant lineage B.1.1.7 is also commonly referred to as the U.K. variant, since it was first detected in that country.

\*\* The time required to genetically-sequence the virus in a positive sample and confirm it as a COVID-19 variant of concern means that this determination might not be made during the week in which the case was first reported.

\*\*\*Data on sex and age groups are listed as unspecified until there are sufficient numbers to allow them to be assigned to the appropriate categories. This ensures that individual cases cannot be identified. Sex is not specified for cases aged 19 years and under.

## Case Outcome

**TABLE 2. Case outcomes, by geographic area**

Geographic Area	Total Cases	Resolved Cases	Percent Resolved	Active Cases	Percent Active	Deaths	Case Fatality Rate (CFR)
Sudbury and districts	583	559	95.9%	24	4.1%	12	2.1%
Ontario	294,144	283,809	96.5%	10,335	3.5%	6,872	2.3%

Data Source: Public Health Sudbury & Districts and Ontario MOH COVID-19 Update

# Probable Exposure

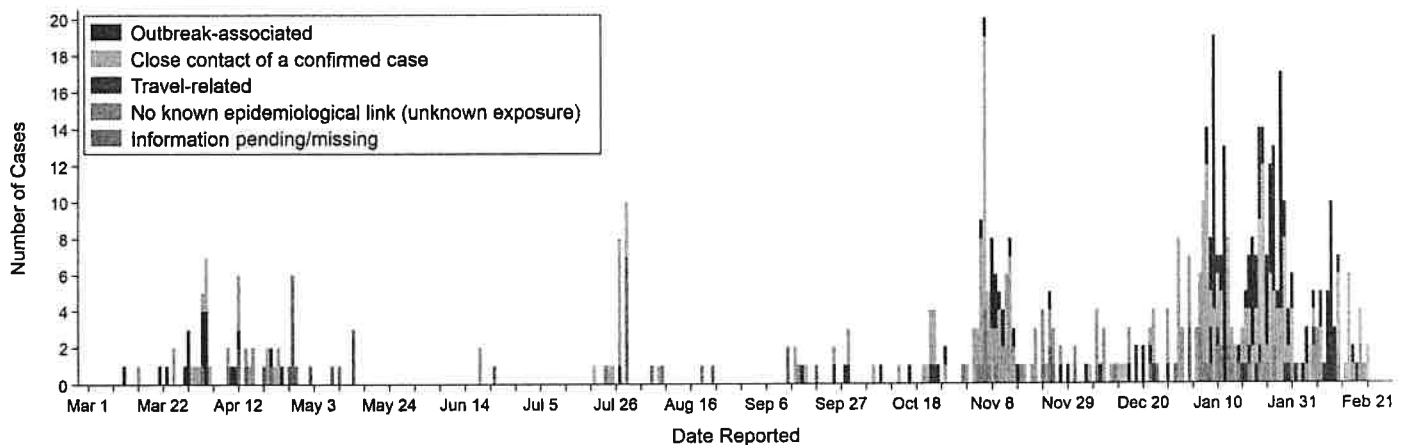
Note: Exposure categories have been revised to better align with categories reported provincially.

**TABLE 3. Cases, by probable exposure, Sudbury and districts**

Exposure	Cases - Total	Percentage (%)	Cases - Past week	Percentage (%)
Outbreak-associated	144	24.7%	1	5.9%
Close contact of a confirmed case	294	50.4%	11	64.7%
Travel-related	51	8.7%	1	5.9%
No known epidemiological link (unknown exposure)	92	15.8%	2	11.8%
Information pending/missing	2	0.3%	2	11.8%

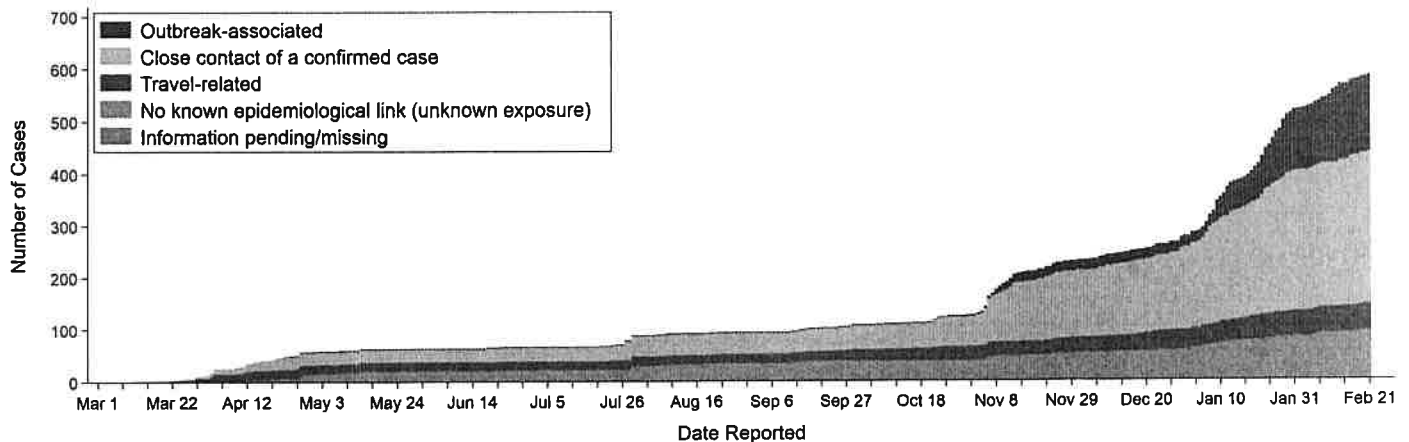
Data Source: Public Health Sudbury & Districts

**FIGURE 5. Cases, by date of reporting and probable exposure, Sudbury and districts**



Data source: Public Health Sudbury & Districts

**FIGURE 6. Cumulative cases, by date of reporting and probable exposure, Sudbury and districts**



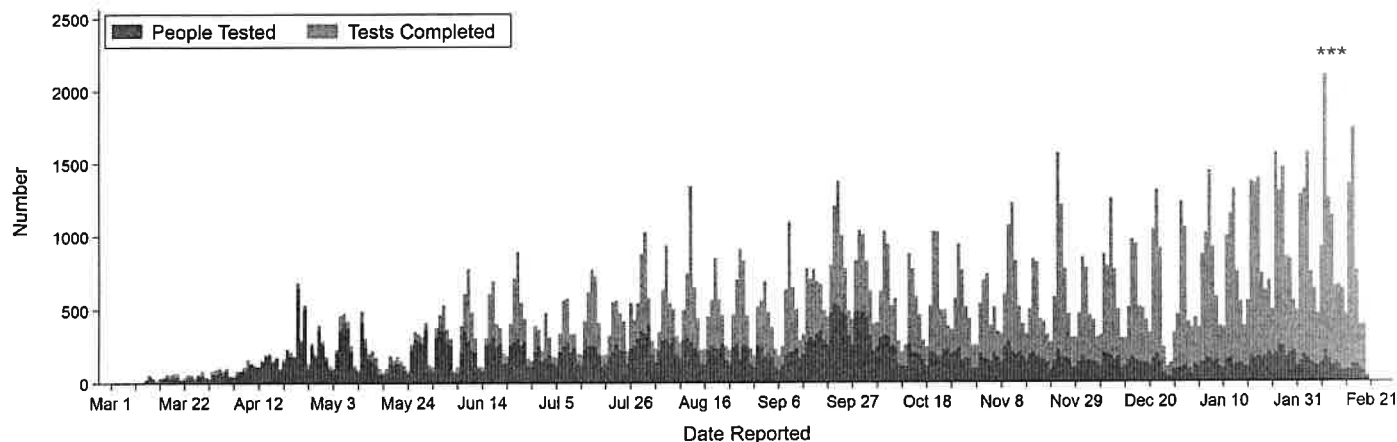
Data source: Public Health Sudbury & Districts

# Testing

Total number of tests for COVID-19 as of end of day on February 20, 2021: **174,795 tests** (this includes preliminary counts of tests completed in the previous 6 days.)

Data includes testing from community assessment centres and other health care settings, as well as targeted surveillance initiatives, such as in long-term care homes.

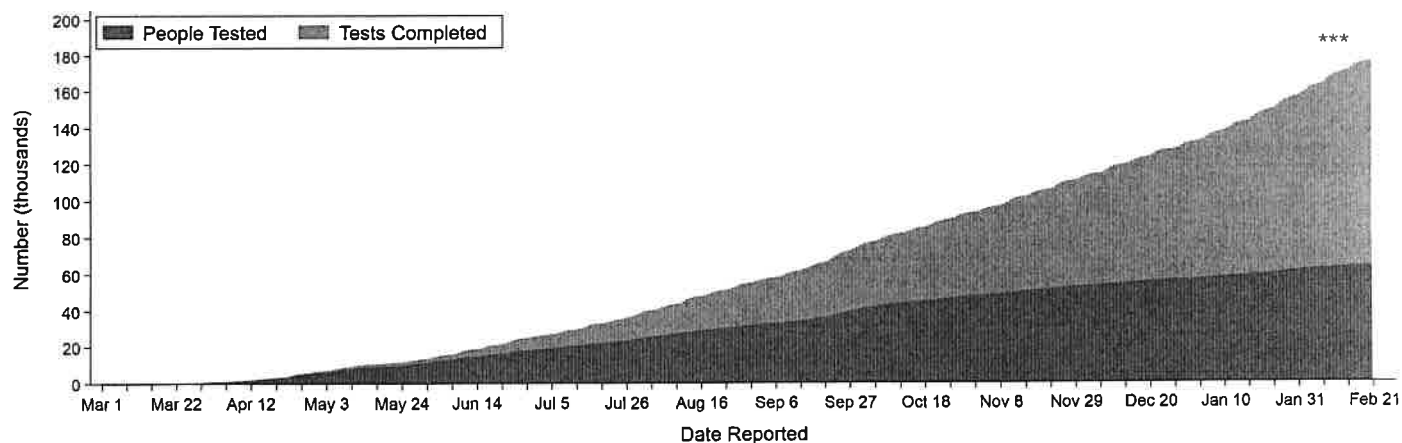
**FIGURE 7. Number of tests and people tested in Sudbury and districts, March 30 to February 20, 2021**



Data source: COVID-19 Testing Report (SAS Visual Analytics), Ministry of Health, February 22, 2021

\*\*\* Preliminary data

**FIGURE 8. Cumulative number of tests and people tested in Sudbury and districts, March 30 to February 20, 2021**



Data source: COVID-19 Testing Report (SAS Visual Analytics), Ministry of Health, February 22, 2021

\*\*\* Preliminary data

# Outbreaks in Facilities

As per the most recent provincial directives, outbreaks of COVID-19 are not automatically declared in long-term care homes and other congregate settings with the confirmation of one case. Public Health assesses each unique situation in determining if an outbreak should be declared, including, for example, occupation, exposures in the home, symptoms of the case, specific risk factors, and local epidemiology.

- In total there have been **24** COVID-19 outbreaks in area facilities.
- A total of **110** cases (64 resident cases and 46 staff cases) are associated with these outbreaks. There has been **11** deaths.
- Of the declared outbreaks, **5** are currently active, and **19** have been declared over.
- The table, below, provides a summary of outbreaks that have been active within the past 7 days.

**TABLE 4. Summary of recent outbreaks in facilities, Sudbury and districts**

Name of Facility	Facility Type	Units Affected	Date Active	Date Declared Over	Total Cases
Amberwood Suites	Retirement Home	Facility-wide	January 5	-	46
Finlandia Village	Long-term care home	Assisted Living	January 22	February 18	10
Health Sciences North	Hospital	Sixth floor South - 2 hallways	February 7	-	11
Elizabeth Centre	Long-term care home	Facility-wide	February 7	-	7
Pioneer Manor	Long-term care home	Facility-wide	February 7	-	8
Cecil Facer Youth Centre	Congregate setting	Cottage #3	February 16	-	1

Data Source: Public Health Sudbury & Districts



# Outbreaks in Schools and Licensed Daycares

An outbreak in a school or daycare will be declared if there are two or more cases of COVID-19 in a 14-day period that have some link with each other, and with evidence that infection occurred at the school.

- In total there have been **7** COVID-19 outbreaks in area schools and licensed daycares.
- All outbreaks have now been declared over.
- The table, below, provides a summary of outbreaks that have been active within the past 7 days.

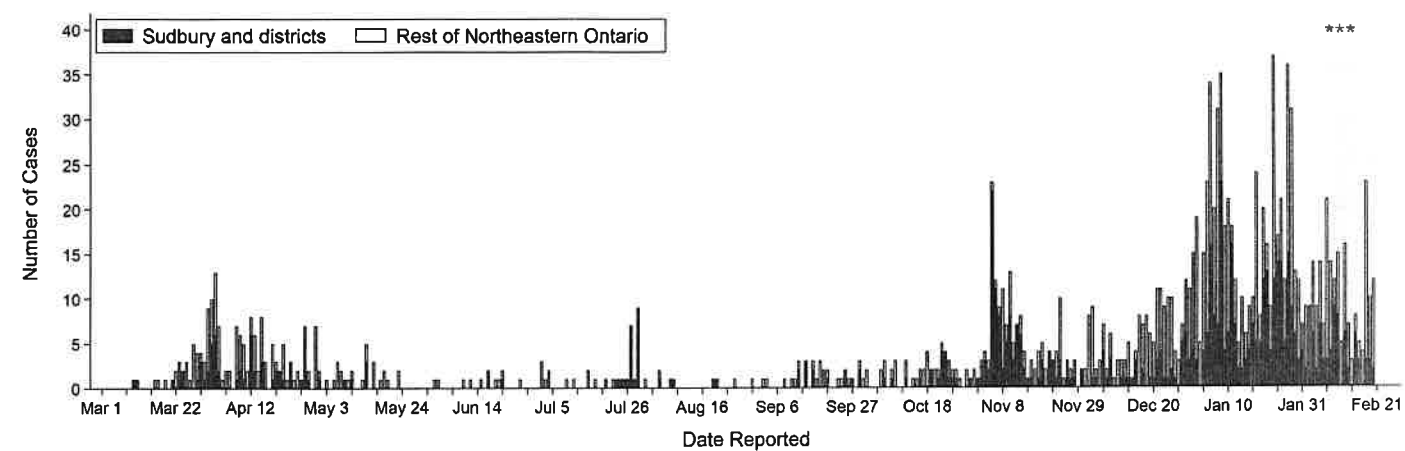
**TABLE 5. Summary of recent outbreaks in schools and licensed daycares, Sudbury and districts**

There have been no active outbreaks in the past 7 days.

Data Source: Public Health Sudbury & Districts

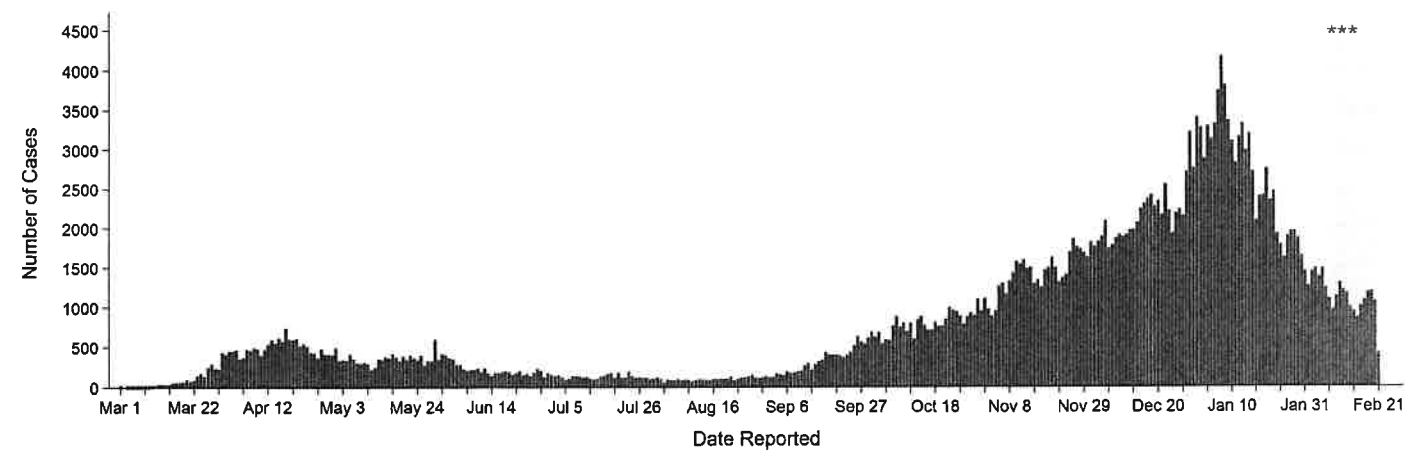
# Regional Context

**FIGURE 9. Confirmed cases, by date of reporting, Sudbury and districts and Northeastern Ontario**



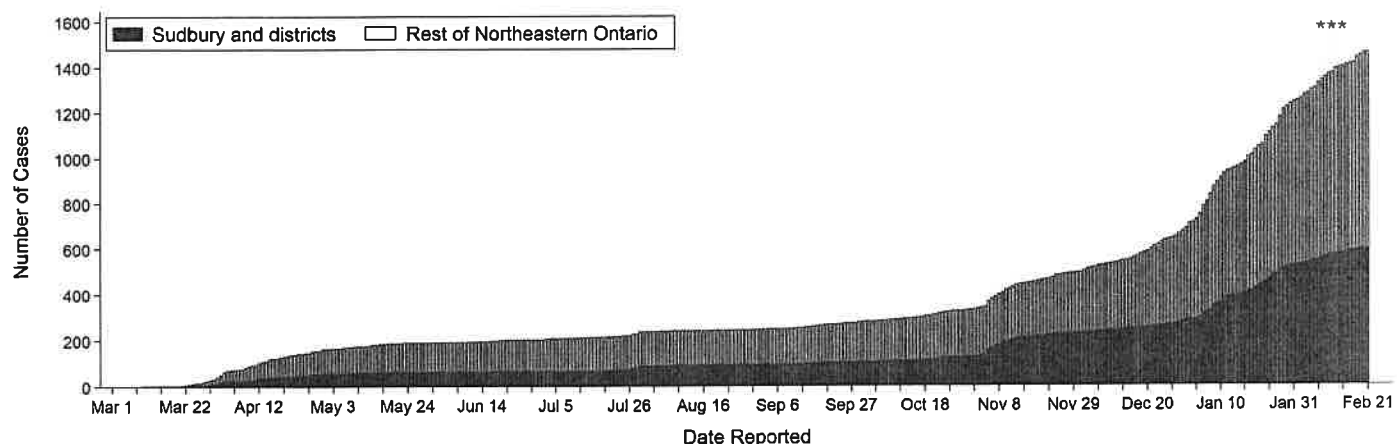
Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. <https://data.ontario.ca/dataset/confirmed-positive-cases-of-covid-19-in-ontario> (Access Date: February 22, 2021)  
\*\*\* Illnesses occurring during this period may not yet be reported

**FIGURE 10. Confirmed cases, by date of reporting, Ontario**



Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. <https://data.ontario.ca/dataset/confirmed-positive-cases-of-covid-19-in-ontario> (Access Date: February 22, 2021)  
\*\*\* Illnesses occurring during this period may not yet be reported

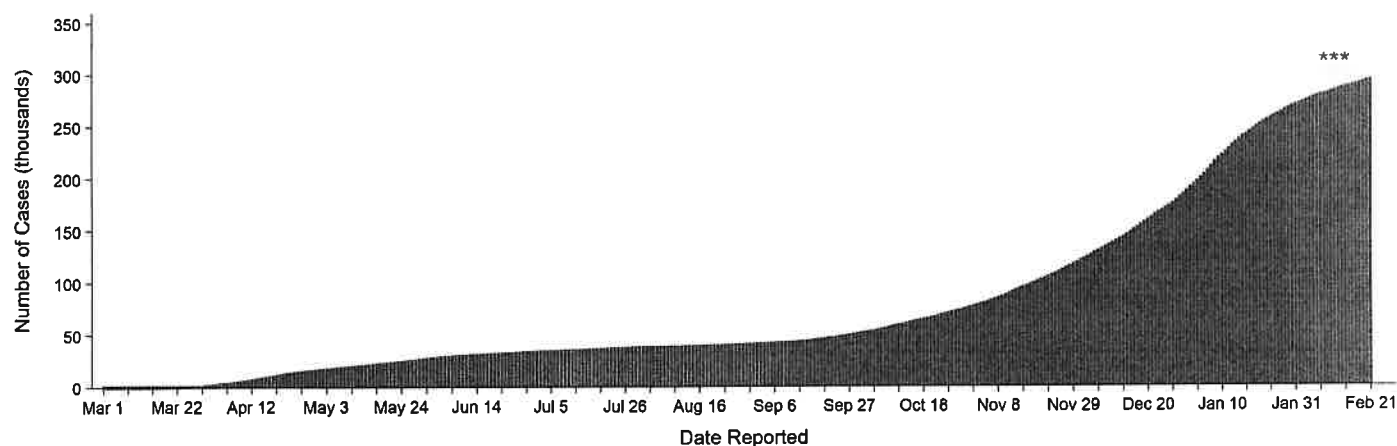
**FIGURE 11. Cumulative confirmed cases, by date of reporting, Sudbury and districts and Northeastern Ontario**



Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. <https://data.ontario.ca/dataset/confirmed-positive-cases-of-covid-19-in-ontario> (Access Date: February 22, 2021)

\*\*\* Illnesses occurring during this period may not yet be reported

**FIGURE 12. Cumulative confirmed cases, by date of reporting, Ontario**



Data Source: Ontario Treasury Board Secretariat, Data Catalogue, Confirmed positive cases of COVID-19 in Ontario. <https://data.ontario.ca/dataset/confirmed-positive-cases-of-covid-19-in-ontario> (Access Date: February 22, 2021)

\*\*\* Illnesses occurring during this period may not yet be reported

**TABLE 6. Regional COVID-19 case summary**

Geographic Area	Cases	Cumulative incidence per 100,000*	Active Cases	Prevalence per 100,000**	Resolved Cases	Resolved Rate	Deceased	Case Fatality Rate	Data Availability†
Canada	845,652	2,249.7	31,375	83.5	814,277	96.3%	21,674	2.6%	February 21
Ontario	294,144	2,006.4	10,335	70.5	283,809	96.5%	6,872	2.3%	February 21
Northern Ontario	3,151	395.4	385	48.3	2,766	87.8%	71	2.3%	February 19
Northeastern Ontario	1,438	257.1	80	14.3	1,358	94.4%	43	3.0%	February 19
Public Health Sudbury & Districts	583	293.2	24	12.1	559	95.9%	12	2.1%	February 21

Data source: Statistics Canada, Government of Canada COVID-19 Update, Ontario MOH COVID-19 Update, Integrated Public Health Information System (IPHIS) database, Northwestern Health Unit, Thunder Bay District Health Unit, Algoma Public Health, North Bay Parry Sound District Health Unit, Public Health Sudbury & Districts, Porcupine Health Unit, Timiskaming Health Unit.

\* Cumulative incidence is the rate at which new cases have occurred since the beginning of the pandemic. \*\* Prevalence is the current rate of active (unresolved) cases in the population

† This report is based on the most currently available information at date and time of production.

**TABLE 7. Regional COVID-19 testing summary**

Geographic Area	Tests Completed	Tests per 100,000	% Tests that were Positive*	People Tested	People Tested per 100,000	% People Tested who were Positive**	Data Availability†
Canada	23,703,735	63,060	Not Available	Not Available	Not Available	Not Available	February 21
Ontario	9,418,803	64,247	3.1%	4,049,709	27,624	7.3%	February 20
Northern Ontario	660,296	82,857	0.5%	238,523	29,931	1.3%	February 20
Northeastern Ontario	457,785	81,834	0.4%	161,654	28,897	0.9%	February 20
Public Health Sudbury & Districts	174,795	87,902	0.4%	63,784	32,076	0.9%	February 20

Data source: Statistics Canada, Government of Canada COVID-19 Update; COVID-19 Testing Report (SAS Visual Analytics), Ontario Ministry of Health, February 22, 2021

\* This is calculated using the following formula: Total Positive Tests / Total Tests x 100%. Note: an individual person may be tested on multiple difference occasions. Samples collected on each such occasion may undergo multiple tests, and thus may yield multiple positive tests. The number of positive tests will therefore exceed the number of confirmed cases within an area.

\*\* This is calculated using the following formula: Total Confirmed Cases / Total People Tested x 100%

† This report is based on the most currently available information at date and time of production.



# February 22, 2021: COVID-19 Vaccine Bulletin

Date: February 22, 2021

Public Health Sudbury & Districts continues to lead the COVID-19 vaccination program, organizing and working with many others to ensure its success. The unwavering and guiding commitment of all those involved is to get “vaccines into arms” as quickly as possible. The confirmation of more vaccine shipments on the way, combined with recent details from the province on [priority group sequencing \(https://covid-19.ontario.ca/getting-covid-19-vaccine-ontario#phase-1\)](https://covid-19.ontario.ca/getting-covid-19-vaccine-ontario#phase-1), mean that Public Health will soon be able to share more concrete plans about clinic locations, eligible groups, how to book appointments and much more. With less than 1% of our total eligible population immunized so far, we have a long way to go—but as we know, every journey begins with a first step. Public Health thanks everyone for their patience and continued commitment to important [public health measures \(https://www.phsd.ca/health-topics-programs/diseases-infections/coronavirus/covid-safety/\)](https://www.phsd.ca/health-topics-programs/diseases-infections/coronavirus/covid-safety/) to prevent the spread of COVID-19.

This edition of the [COVID-19 Vaccine Bulletin \(https://www.phsd.ca/health-topics-programs/vaccines-immunizations/coronavirus-covid-19-vaccine/covid-19-vaccine-bulletin/\)](https://www.phsd.ca/health-topics-programs/vaccines-immunizations/coronavirus-covid-19-vaccine/covid-19-vaccine-bulletin/) highlights information on sequencing of Phase One priority groups, a summary of the vaccine program rollout, Pfizer-BioNTech update, and clinic planning across the Sudbury and Manitoulin catchment area.

## Sequencing of Phase One priority groups

With the expected gradual increase in Ontario's COVID-19 vaccine supply, the Ministry of Health recently communicated priority sequencing for the vaccination program over the coming weeks.

The following immediate priority for first-dose vaccination continue to be:

- Staff and essential caregivers in long-term care homes, high-risk retirement homes and First Nations Elder care homes, including any residents of these settings that have not yet received a first dose of the vaccine.
- Alternative level of care patients in hospitals who have confirmed admission to a long-term care home, retirement home or other congregate care home for seniors.
- “Highest Priority” health care workers, followed by “Very High Priority” health care workers, as per the Ministry of Health’s [guidance on Health Care Worker Prioritization \(http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/Guidance\\_for\\_Prioritizing\\_HCW\\_01-08.pdf\)](http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/Guidance_for_Prioritizing_HCW_01-08.pdf) (PDF, 979 KB).
- Indigenous adults in northern remote and higher risk communities, including on-reserve and urban communities.

Next priority for first-dose vaccination once all reasonable steps are taken to complete first-dose vaccinations of all staff, essential caregivers and residents of long-term care homes, high-risk retirement homes and First Nations Elder care homes include:

- Adults 80 years of age and older.

- Staff and caregivers in retirement homes and other congregate care settings for seniors (for example, assisted living).
- Health care workers in the "High Priority" level (as per the Ministry of Health's guidance on Health Case Worker Prioritization).
- All Indigenous adults.
- Adult recipients of chronic home care.

#### Guidance for prioritizing health care workers

([http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/Guidance\\_for\\_Prioritizing\\_HCW\\_covid-01-08.pdf](http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/Guidance_for_Prioritizing_HCW_covid-01-08.pdf)) (PDF, 979 KB) for COVID-19 vaccination is outlined in the revised Ministry of Health document, recognizing that currently demand outstrips supply. Prioritization within this group considers various criteria such as risk of exposure, patient population's risk and criticality of the worker's role and responsibilities.

## Phase One vaccine program rollout

### Immunizations to date:

To date, 1729 individuals have been immunized through vaccination clinics at all long-term care homes within Public Health's service area, one high-risk retirement home (Regent Manor), and 6 Elder care homes. This has resulted in a first dose of the COVID-19 vaccine for all consenting residents of area long-term care and one high-risk retirement home.

### Upcoming plans:

Public Health Sudbury & Districts is working with partners to organize clinics for the next eligible groups in the sequence. The clinics will be held within seven days of receipt of the vaccine which is anticipated to arrive the week of February 22. This includes:

- Staff and essential caregivers of long-term care home residents.
- Highest priority health care workers.
- Residents of registered retirement homes.

Depending on the eligible group and location throughout the Public Health Sudbury & Districts catchment area, clinics will be set up as mass immunization clinic (Sudbury for long-term care home workers and essential caregivers), hospital-coordinated mini-mass clinics (across catchment area for highest priority health care workers, and in the districts also for long-term care home workers and essential caregivers), and as mobile clinics (Sudbury for residents of retirement homes).

An important reminder is that all clinics are by appointment only. For the groups described above and where possible, individuals are pre-qualified and entered into the booking system to confirm eligibility when they call to book appointments.

Planning for vaccine that is anticipated to arrive the week of March 1 is underway. Currently the focus is on working with partners to promote access for recipients who are within urban Indigenous communities and within First Nations communities. More to come!

## Pfizer-BioNTech update

On January 27, 2021, the Ministry of Health provided direction to extend the dosing interval for the Pfizer-BioNTech vaccine. This is in response to the temporarily reduced vaccine availability from the federal government, uncertainty of supply, as well as the current provincial epidemiology of the pandemic.

The second dose of the Pfizer-BioNTech COVID-19 vaccine will now be administered 35 days after of the first dose, and no later than 42 days, for all vaccine recipients other than residents of long-term care homes, high-risk retirement homes and First Nations elder care homes. The dosing interval for residents should be maintained at 21 to 27 days.

This guidance on dosing interval is aligned with the updated National Advisory Committee on Immunization's recommendations (<https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/recommendations-use-covid-19-vaccines.html>) on the use of COVID-19 mRNA vaccines. It is also consistent with the recommendations from the World Health Organization and the Centre for Disease Control. Updates will be provided as required.

At time of writing, there are no changes to the Moderna dosing schedule.

## What's next?

With ongoing vaccination efforts across our region, Public Health continues to recruit immunizers, response assistants, and volunteers to support the rollout of the COVID-19 vaccine. Get involved by visiting the current opportunities (<https://www.phsd.ca/join-us/>) section of our website or give us a call at 705.522.9200 (toll-free 1.866.522.9200).

If you a primary care\* practitioner willing to participate in the upcoming COVID-19 mass and mobile clinics led by Public Health Sudbury & Districts, please visit the Primary Care Registry ([https://www.phsd.ca/wp-content/uploads/2021/02/Primary\\_Care\\_Registry.docx](https://www.phsd.ca/wp-content/uploads/2021/02/Primary_Care_Registry.docx)) and submit your application. Individuals who register may be contacted by Public Health Sudbury & Districts to schedule participation in clinics pending availability.

\*for the purpose of the registry, primary care is defined as health professionals who have the authority to administer the COVID-19 vaccine without medical directive (i.e. MDs, NPs, RNs and RPNs, pharmacists, pharmacist interns, registered pharmacy students or pharmacy technicians).

**An important reminder:** It is critical to maintain public health measures to slow or limit the spread of COVID-19. This includes masking, distancing, hand-washing, and staying home as much as possible. These measures will keep case counts low until the vaccine can protect us. The measures are also critical in preventing a third wave of infections as we see growing numbers of the highly transmissible variants of concern. Keeping case numbers low protects lives, our public health and health care systems, our education systems as well as our economy.

If you have any questions, please contact our call centre at 705.522.9200 (toll-free 1.866.522.9200).

Dr. Penny Sutcliffe, Medical Officer of Health, Public Health Sudbury & Districts

---

This item was last modified on February 22, 2021

**Sudbury**  
705.522.9200

**Chapleau**  
705.860.9200

**Sudbury East**  
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**Espanola**  
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**Manitoulin Island**  
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www.manitoulinstreams.com

Feb 20, 2021

15 Old Mill Road  
P.O. Box 34  
Kagawong, ON  
POP 1J0

**RE: Donations and Donor Recognition – Future Kagawong River Rehabilitation Projects**

Dear Mayor and Council,

As you are aware, Manitoulin Streams has a stream rehabilitation master plan for the Lower Kagawong River, and in recent years we have already worked on several of the sites along the river in collaboration with the Township of Billings. We have additional sites along the river that we hope to conduct rehabilitation work on in the coming years. One of these is at the mouth of the river where it enters Mudge Bay.

In addition to the planned ecological rehabilitation at the river mouth site, we have recently been considering establishing an angling platform in this area, complete with educational/interpretive information. We may be fortunate enough to receive some external funding for this venture, but we will also need to contribute money ourselves. As a non-profit organization, we have limited options for raising funds. One method available to us is to create a donor recognition plaque on the angling and interpretive platform if/when we are able to undertake this project.

Since this installation would be on Billings municipal property, and would be undertaken in collaboration with the Township, we are asking Council for permission to install a donor recognition type plaque or display. Knowing that this is acceptable to Council will allow us to proceed with fund-raising related to this project, positioning us to implement it when the timing is right.

On behalf of Manitoulin Streams, I thank you for your consideration of this request.

Sincerely,

Seija Deschenes  
Project Coordinator Manitoulin Streams Improvement Association

## Kathy McDonald

---

**From:** Theresa at Manitoulin Planning Board <mpbcarlisle@bellnet.ca>  
**Sent:** Thursday, February 11, 2021 10:49 AM  
**To:** Silvio Berti; Ruth Frawley; 'Alton Hobbs'; Kathy McDonald; scarr@gorebay.ca; 'Patsy Gilchrist'; brentstdenis@gmail.com; clerk@gordonbarrieisland.ca  
**Cc:** Dan Osborne; Eric Russell; Ian Anderson; Ian Anderson; Ken Noland; Lee Hayden; lhayden@gordonbarrieisland.ca; mcdowellfarms; Richard Stephens; Robert Brown  
**Subject:** OP Reserve Funds

Good Morning,

Subject: Official Plan Reserve Funds

There is approximately \$8,000.00 in the OP Reserve, that could be put into another project, as the Official Plan project has been completed.

We are moving forward with updating the Municipal By-laws and developing a Natural Heritage System this year.

The general consensus of the Planning Board (November 2018) was that these funds were intended to benefit all of the Manitoulin Planning Area, including the Unincorporated Townships of Robinson and Dawson. These funds could be used for costs associated with obtaining extra hard copies of the Official Plan document, or developing a Natural Heritage System, or updating the Municipal Zoning By-laws.

As it is Budget time, it may be considered appropriate to move these funds into a new project?

I would appreciate it if you would discuss this to your next Municipal Council Meeting and let me know Council's opinion/thoughts of moving the funds to a new project.

Thank you.

*Theresa*

Theresa Carlisle,  
Secretary Treasurer  
Manitoulin Planning Board  
Harbour Centre  
40 Water Street, Unit 1  
P.O. Box 240  
Gore Bay ON P0P 1H0  
TEL: 705-282-2237  
FAX: 705-282-3142

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# Registration



**AMO Virtual  
2021 AGM and  
Conference  
AUGUST 15 -  
18, 2021  
HOSTED BY  
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register online, please  
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## Delegate Virtual Package: Full Conference

This package includes:

- Access to all scheduled conference educational programming on Monday, Tuesday and Wednesday
- Access to all scheduled conference networking events
- Access to delegation meetings with the Province

## Delegate Virtual Package: Full Conference Rates

	<b>Early Bird</b> <i>Rates are only valid until Friday, April 30, 2021 at 4:00 PM.</i>	<b>Regular</b>
<b>Member:</b>	\$600.00	\$675.00

- Access to view all the presentations post-Conference for 30 days

<b>Non-Member:</b>	\$750.00	\$850.00
<b>*Non-Member Students:</b>	\$400.00	\$400.00

**\* Please note that individual registrations provide access to the virtual conference for the registrant only**

**\* To be eligible for a non member student rate, a valid student identification must be provided at the time of registration. The student rate is open to full-time secondary and post-secondary students.**

## Please Note

- A confirmation notice will be sent to the DELEGATE e-mail for all registration, modifications or cancellations. Review your confirmation carefully for accuracy.
- Payments by cheque must be postmarked before April 30, 2021 in order to receive early bird pricing. Registrations received after April 30, 2021 at 4:00 pm will be processed at the regular rate.
- All cancellations must be submitted in writing to the Association of Municipalities of Ontario via email at [events@amo.on.ca](mailto:events@amo.on.ca). Cancellations received prior to 4:00 pm ET, July 5, 2021 will be eligible for a refund less \$95.00 (plus HST) for members and \$120.00 (plus HST) for non-members administration fee. Cancellations made after 4:00 pm are non-refundable. An alternate attendee name may be substituted at any time.
- Registration forms that are not complete will not be processed, please ensure the details you have provided are correct and complete.
- Registration inquiries can be directed to [events@amo.on.ca](mailto:events@amo.on.ca) or by calling 416.971.9856 x315.

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### CONTACT

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[events@amo.on.ca](mailto:events@amo.on.ca)

T 416.971.9856

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THE CORPORATION OF THE TOWNSHIP OF BILLINGS

BY-LAW 2021 - 08

BEING A BY-LAW TO UPDATE EMPLOYEE SALARY RANGES

WHEREAS Council of the Corporation of the Township of Billings established a salary grid through By-law 2018-40; and,

WHEREAS employee positions have been changed since the passing of By-law 2018-40 and Council deems it appropriate to update the salary grid accordingly;

NOW THEREFORE the Council of the Corporation of the Township of Billings hereby enacts as follows:

1. That Schedule "A" forms part of this by-law;
2. That employee remuneration shall be paid in accordance with the salary range grids set out in Schedule "A", as determined by Council;
3. That the salary range grid set out in Schedule "A" shall be increased each year, effective January 1, by the November Ontario Consumer Price Index – All Items for the previous calendar year;
4. That employees shall progress one step up the salary grid set out in Schedule "A" six months after their hire date, and annually each year thereafter, pending a satisfactory performance review;
5. That a 'red circle rate' be used to provide salary protection for any employee whose new pay grid is lower than the current pay grid and that the red circle rate continue until the salary range meets or exceeds the employee's red-circled salary;
6. That any employee that is at the top of their category are eligible to receive a bonus based on recommendation by the CAO/Clerk.
7. That the salary grids set out in Schedule "A" shall be reviewed in the second year of each term of Council;
8. That By-law 2018-40 is repealed; and,
9. That this by-law shall come into force and take effect upon the day of the final passing thereof.

Read a First, Second and Third time and enacted this 2<sup>nd</sup> day of March, 2021.

---

Ian Anderson, Mayor

---

Kathy McDonald, CAO/Clerk

**The Corporation of the Township of Billings**  
**By-law 2021-08**  
**Schedule "A"**

**Employee Salary Grid\***

<b>Position</b>	<b>Range</b>		<b>Step 1</b>	<b>Step 2</b>	<b>Step 3</b>	<b>Step 4</b>	<b>Step 5</b>	<b>Step 6</b>
CAO/Clerk	\$62,172 - \$82,675	Salary	\$62,172	\$66,554	\$70,938	\$75,321	\$79,703	\$82,675
Treasurer	\$52,961 - \$67,352	Salary	\$52,961	\$55,840	\$58,717	\$61,596	\$64,474	\$67,352
Deputy Clerk/Finance Assistant	\$47,602 - \$55,504	Salary	\$47,602	\$49,290	\$50,843	\$52,398	\$53,951	\$55,504
Economic Development Officer	\$47,193 - \$62,924	Salary	\$47,193	\$50,339	\$53,485	\$56,631	\$59,778	\$62,924
Administrative Assistant	\$34,744 - \$42,257	Salary	\$34,744	\$36,705	\$38,094	\$39,481	\$40,870	\$42,257
Financial Assistant	\$20,58 - \$27.27	Hourly	\$20.58	\$21.92	\$23.25	\$24.59	\$25.92	\$27.27
Public Works Superintendent	\$54,341 - \$66,240	Salary	\$54,341	\$56,720	\$59,975	\$62,354	\$64,734	\$66,240
Public Works First Operator	\$47,677 - \$59,912	Salary	\$47,677	\$49,168	\$51,614	\$54,061	\$56,509	\$59,912
Public Works Operator	\$39,301 - \$48,215	Salary	\$39,301	\$41,599	\$43,382	\$45,165	\$46,947	\$48,215
Landfill Attendant	\$17.01 - \$20.15	Hourly	\$17.01	\$17.64	\$18.27	\$18.89	\$20.03	\$20.15
Casual Labour	\$16.42 - \$20.02	Hourly	\$16.42	\$17.15	\$17.86	\$18.58	\$19.30	\$20.02
By-Law Enforcement	\$18.03 - \$22.41	Hourly	\$18.03	\$18.91	\$19.78	\$20.66	\$21.53	\$22.41
Custodian	\$15.20 - \$17.69	Hourly	\$15.20	\$15.70	\$16.19	\$16.70	\$17.19	\$17.69
Marina Manager	\$18.97 - \$22.41	Hourly	\$18.97	\$19.66	\$20.35	\$21.04	\$21.72	\$22.41

**Student Salary Grid**

<b>Position</b>	<b>Hourly Rate</b>
Lead Marina Attendant	Minimum wage + \$1.00
Marina Attendant	Minimum wage
Swim Instructor	Minimum wage + \$2.00
Swim Assistant	Minimum wage
Public Works	Minimum wage

1-Jan-21

# THE CORPORATION OF THE TOWNSHIP OF BILLINGS

## BY-LAW 2021-09

### Being a by-law to set tax ratios for the 2021 taxation year

WHEREAS the Municipal Act S.O. 2001 Chapter 25 Section 308 provides the necessary authority;  
and,

WHEREAS it is deemed expedient to establish the following taxation ratios to confirm the relative share of municipal taxation to be borne by the various property classes;

NOW THEREFORE the Council of the Corporation of the Township of Billings ENACTS AS FOLLOWS:

That for the 2021 taxation year the following tax ratios shall apply:

<u>Property Classification</u>	<u>Tax Ratio</u>
Residential/Farm	1.000
Designated Farm	0.250
Managed Forests	0.250
Commercial	1.000
New Construction Commercial	1.000
Commercial Vacant	0.700
Industrial	1.000
New Construction Industrial	1.000
Industrial Vacant	0.650

That this By-Law shall come into force and take effect on the date of the passing thereof.

Read a first, second, third time and enacted this 2nd day of March, 2021.

\_\_\_\_\_  
Ian Anderson, Mayor

\_\_\_\_\_  
Kathy McDonald, CAO/Clerk





## **EMPLOYMENT OPPORTUNITY SEASONAL STUDENT POSITIONS**

The Township of Billings is accepting applications for a number of seasonal student positions for the spring/summer of 2021. Contract length varies from 8-12 weeks depending on position and successful applicants' availability.

Marina Assistant (2 @ 35 hours per week)  
Public Works Assistant (2 @ 35 hours per week)  
Museum Assistant (35 hours per week)  
Library Assistant (35 hours per week)

Applications (cover letter and resume) will be accepted by the Municipal Office until March 26, 2021 at 4pm and may be submitted in person, by mail or email. Please direct enquiries and applications to:

[kmcdonald@billingstwp.ca](mailto:kmcdonald@billingstwp.ca)

15 Old Mill Road  
PO Box 34  
Kagawong ON P0P 1J0

Please note that only those applicants selected for an interview will be contacted.  
Applicants must meet funding partner eligibility criteria, including age/student status for funded positions.

# Memorandum

To: Council

cc: CAO/Clerk, Treasurer, Economic Development Officer

From: Tiana Mills, Administrative Assistant

Date: 24-02-2021

**RE: Canada Healthy Communities Initiative Program**

---

## **Recommendation**

That Council direct staff to complete an application to the Canada Healthy Communities Initiative to create a new community space at the Sandy Beach (including covered gazebos with seating, benches, swing set, slide, signage and outdoor workout equipment), and submit the application no later than March 9, 2021.

## **Background**

- This initiative of \$31 million will fund small scale infrastructure projects to create safer, more vibrant and inclusive communities.
- The minimum funding amount for projects is \$5,000 and the maximum funding amount is \$250,000 for each project.
- The Healthy Communities Initiative supports communities as they create public spaces to respond to an ongoing need arising from COVID-19 over the next 2 years.
- COVID-19 has brought an influx of tourists to the core of Kagawong (the Bridal Veil Falls Trail System and the Main Beach/Playground/Pavilion area) that is much greater than we have seen in previous years.
- Developing a second family friendly location will alleviate crowding in the Kagawong core.
- Purchasing outdoor play and exercise equipment will provide more outdoor options for children, adults and seniors to stay active while maintaining social distance.
- Due to the size constraints at the Main Beach a swing set was not feasible when the new play equipment was installed, but at the Sandy Beach there will be ample room.
- Based on our preliminary research, the proposed application will be valued at approximately \$85,000.

## **Considerations**

- There is a second intake closing June 25, 2021 where a failed application can be resubmitted, a new application can be submitted or an additional application may be submitted if the first was approved.
- The Kagawong Outdoor Rink is also an option however I believe we can make a stronger case in creating a new community space at the Sandy Beach based on the funding criteria.

As always, I encourage council discussion on this topic and questions of staff.

Respectfully submitted,

Tiana Mills

# THE CORPORATION OF THE TOWNSHIP OF BILLINGS

## BY-LAW 2021-10

### Being a By-Law to provide for the control of nuisance coyotes

WHEREAS Section 9 of the *Municipal Act, S.O. 2001, c. 25*, as amended, provides that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act;

AND WHEREAS Section 128 of the *Municipal Act, S.O. 2001, c. 25*, as amended, provides that a municipality may prohibit and regulate with respect to public nuisances, including matter that, in the opinion of Council, are or could become or cause public nuisances;

AND WHEREAS the Council of the CORPORATION OF THE TOWNSHIP OF BILLINGS deems it advisable to enact such regulations and to provide compensation, for the taking of nuisance coyotes to reduce conflicts between such nuisance coyotes and livestock of stockowners in the Corporation of the Township of Billings;

NOW THEREFORE THAT the Council of the Corporation of the Township of Billings enacts as follows:

1. THAT THE CORPORATION OF THE TOWNSHIP OF BILLINGS shall provide reimbursement to a licensed trapper or licensed hunter for each coyote that has been taken as a nuisance animal, subject to the following conditions:
  - a. The nuisance animal was taken within the boundaries of the Municipality;
  - b. A completed Coyote Predation Compensation Claim Form has been submitted to the Municipality;
  - c. The trapper or hunter shall be currently licensed by the Ministry of Natural Resources and Forestry and shall provide a valid Small Game or Trapping License Number;
  - d. The trapper or hunter must follow all hunting and trapping rules and regulations;
2. THAT the payment to any licensed trapper or licensed hunter who has met the regulations and satisfied the requirements of this By-law is included in Schedule A to this By-law.
3. THAT the process for Coyote Predation Compensation Claim is included in Schedule B to this By-law.
4. THAT this By-law shall come into full force and effect upon third and final reading.

READ A FIRST, SECOND AND THIRD TIME AND ENACTED this \_\_\_\_ day of \_\_\_\_\_, 2021.

\_\_\_\_\_  
Ian Anderson, Mayor

\_\_\_\_\_  
Kathy McDonald, CAO/Clerk

# **THE CORPORATION OF THE TOWNSHIP OF BILLINGS**

## **BY-LAW 2021-10**

### **Schedule 'A'**

The payment to any licensed trapper or licensed hunter who has met the regulations and satisfied the requirement of this By-law shall be \$50.00 of lawful Canadian currency, per coyote pelt.

The payment will be made during the Municipality's regular accounts payable process and once the completed Claim Form has been submitted to the Clerk.

THE CORPORATION OF THE TOWNSHIP OF BILLINGS will fund the Coyote Predation Compensation Program up to a maximum limit of \$2,000 per calendar year, on a "first come, first serve" basis.

# **THE CORPORATION OF THE TOWNSHIP OF BILLINGS**

## **BY-LAW 2021-10**

### **Schedule 'B'**

#### **Process for Coyote Predation Compensation Claim**

1. The licensed trapper or licensed hunter must complete Section 1 of the Coyote Predation Compensation Form. The licensed hunter or licensed trapper must provide their Small Game or Trapping License Number.
2. The licensed trapper or licensed hunter will present the coyote to the municipal designate at the Municipal Landfill, 9490 Highway 540 Kagawong, ON P0P 1J0, during its regularly scheduled hours.
3. A designated person(s) of the municipality shall mark the pelt of the coyote by painting the right foot red, or direct the claimant to do so under supervision from the designated person, and complete Section 2 of the Coyote Predation Compensation Form.
4. The pelt of the coyote will be returned to the licensed trapper or hunter for proper disposal.
5. When Sections 1 and 2 of the Coyote Predation Compensation Claim Form have been completed correctly, the municipal designate will sign the completed form and return it to the Municipal Clerk for reimbursement to the licensed trapper or licensed hunter.
6. The Clerk shall keep a record of all Coyote Predation Compensation Claim Forms Submitted to the Municipality.



## THE CORPORATION OF THE TOWNSHIP OF BILLINGS

BY-LAW 2021-10

### COYOTE PREDATION COMPENSATION CLAIM FORM

#### 1. Declaration

I, \_\_\_\_\_ of \_\_\_\_\_  
Name Mailing Address

declare that I have taken a coyote on Lot \_\_\_\_\_, Concession \_\_\_\_\_

within the Municipal Boundaries of The Township of Billings on \_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Small Game or Trapping License Number

#### 2. Municipal Certification

This certifies that \_\_\_\_\_ coyote carcass(es) has/have been presented to Municipal Staff at  
# of Carcasses

\_\_\_\_\_ and have been marked in accordance with the  
Municipal Address

Township of Billings policy by a designated person at the Municipality.

**\*\*This certification must be signed by a Municipal Officer no later than 5 days from the authorization expiry date.**

\_\_\_\_\_  
Municipal Designator's Signature

\_\_\_\_\_  
Date

#### 3. Municipal Approval for Payment

Payment for \_\_\_\_\_ coyote carcass(es) at \$50.00 each is hereby approved.  
# of Carcasses

\_\_\_\_\_  
Municipal Office Staff Signature

\_\_\_\_\_  
Date

**TOWNSHIP OF BILLINGS**  
**Parks, Recreation and Wellness Committee**  
**MINUTES**

February 22, 2021

Electronic Meeting

**Present:** Sharon Alkenbrack, Deb Flaxman, Sharon Jackson, Diane Larocque, Andrew Preyde, Shannon Smith, Kathy McDonald (staff) and Tiana Mills (staff)  
Members of the Public

**1. Opening**

Motion by Deb Flaxman, seconded by Diane Larocque

That the meeting be called to order at 7 p.m. with Chair Jackson presiding.

Carried

**2. Approval of the Agenda**

Motion by Sharon Alkenbrack, seconded by Diane Larocque

That the agenda for the February 2, 2021 meeting be accepted as presented.

Carried

**3. Declaration of Pecuniary Interest**

None

**4. Adoption of Minutes**

Motion by Shannon Smith, seconded by Diana Larocque

That the minutes of the November 23, 2020 meeting be accepted as presented.

Carried

**5. Delegations**

None

**6. Council Report**

Committee members received the report.

**7. Financial Report**

Committee members received the report.

**8. Old Business**

**a) Santa meet and greet update**

Approximately 20 kids attended. All letters that were received were answered. Plans for the meet and greet for 2021 are underway.

**b) Outdoor Rink**

Andrew Preyde presented a plan to repair the rink at a cost of approximately \$28,100 plus a wish list of \$10,700 for a total of \$38,800. Andrew stated that he has been seeking pledges and feels that he can get over \$10,000 in donations to the rink.

Motion by Andrew Predye, seconded by Diane Larocque

That a recommendation be made to Council to include \$40,000 in the draft 2021 budget for rink repairs.

Carried

Motion by Shannon Smith, seconded by Deb Flaxman

That a recommendation be made to Council to give permission to the Parks, Recreation and Wellness committee to fundraise for the rink repairs.

Carried

**c) Indoor Walking Program**

Postponed until next winter.

**d) Walking Route signage costs/inventory**

Action item to find locations for the walking route signs.

**e) March event**

Postponed until next year, due to COVID19.

**f) and g) Family Forum date and venue and Senior Forum date and venue**

Committee agreed that a survey should be done at community events such as the Easter event and Wednesday markets, combined with question for both families and seniors.

**9. New Business**

**a) Budget:**

Sharon Jackson presented a budget of \$12,200 worth of expenditures. Committee discussion reduced that to \$4200 by eliminating some of the events due to Covid 19 uncertainties for the remainder of 2021.

Motion by Sharon Alkenbrack, seconded by Deb Flaxman

That a recommendation be given to Council to approve \$300 for the Easter Egg Hunt.

Carried

**b) Strategic Plan Priorities**

Discussion postponed until the next meeting.

**c) Dog Park Survey**

Sharon Jackson found a survey on line that could be used to determine the usage of the dog park.

**d) Newsletter**

Sharon Jackson informed the group that the township has a newsletter. The Parks, Recreation and Wellness events could be included, as well as fundraising events put on facebook and the website.

**e) April Event**

Not discussed



**f) Volunteer recognition week April 18-24**

Sharon Jackson will have a declaration added to the Council agenda to recognize Volunteer recognition week.

**g) Earth Day (April 22) global clean up**

Sharon Jackson discussed the "ditch dive" that was held in previous years. Discussion on putting out garbage cans for smelt season and have them chained to trees, especially where people stop.

**10. Correspondence**

None

**11. Information**

None

**12. Notice of Motion**

Contained within minutes and to be added to Council agenda

**13. Closed Session**

None

**14. Next Meeting March 22, 2021 at 7 p.m.**

**15. Adjournment**

Motion by Diane Larocque, seconded by Shannon Smith  
That this meeting be adjourned at 8:48 p.m.

Carried

**TOWNSHIP OF BILLINGS**  
**Economic Development Committee**  
**MINUTES**

February 10, 2020, 7:00 pm

Electronic Meeting (Zoom Meetings)

**PRESENT:** Councillor Sharon Alkenbrack (Chair), Suzanne Darlston, Councillor Sharon Jackson, Diane Larocque, Tracy Paris

**Staff:** Todd Gordon, Economic Development Officer; Kathy McDonald, CAO

**REGRETS:** Rick Rusk

**Members of the Public:** Yes

**1. Opening of Meeting**

The meeting was called to order at 7:02 p.m. by the chair.

**2. Approval of Agenda**

Motion by Diane Larocque; Second by Sharon Jackson:

That the agenda for the February 10, 2021 meeting be accepted as presented. Carried.

**3. Disclosure of Pecuniary Interest**

None

**4. Adoption of Minutes**

Motion by Sharon Jackson; Second by Tracy Paris:

That the minutes of the December 9, 2020 meeting be accepted as presented. Carried.

**5. Delegations:**

None

**6. Council Update Report**

Chair Alkenbrack provided a brief overview of the previous Council meeting (Regular Council meeting of February 02, 2021).

**7. Financial Report**

- The EDO provided a brief update: No EDC-related revenue or expenditures since the previous meeting (December 9, 2020).

**8. Old Business**

**a) Community Planters/Benches – Discussion**

The Edo provided an update on benches and planters. A design has been chosen that maximized the use of the material at hand. Public Works staff, who have had more time than normal because of the very mild winter, have completed 9 units to-date – planters, benches and/or various combinations. The committee asked for dimensions of the planter boxes (interior) for future reference. Some discussion of the need to line the boxes with landscape cloth; Discussion of soil/organic material needs.

**b) Billings Promotion Strategy – Discussion**

Given the passage of time and the lack of a January meeting, recommended a minor change of direction on this topic: continuing to think about and discuss a bigger picture “strategy” for township awareness and promotion, but in the meantime, considering re-vamping and updating the amenity/site/business map brochure as developed by Kendra Edwards Design, and last updated in 2018. This would provide an updated hard-copy promotion item for 2021 – and effort could be made to harmonize the material in this document with web and social meeting promotional material. The committee agreed to this and all agreed to consider updates/revisions to the existing brochure/map document. The EDO was asked to contact Kendra Edwards regarding some design/revision work. The CAO reminded the EDO and the committee that a recommendation on this matter, including direction for the EDO to engage with Kendra Edwards Design and some consideration of expenditure on this item in the 2021 budget.

**c) Community Development – “The New Local” - Discussion**

The committee had a brief discussion of Principle 3: “Connectivity” from *The New Local* community development program. The committee discussed ways of learning from *community* – ours and others, and ways of increasing connectivity through improved learning as well as the ongoing challenge of staying connected locally while operating in a truly globalized environment.

**d) Jabbawong Story-Telling Festival – Discussion**

The parameters have not changed, although everyone is concerned about the impact of the ongoing pandemic. The committee acknowledged that the festival needs more story-tellers for children.

**e) Social Media Workshop – Discussion**

The situation for this event is very much like that of the story-telling festival: It is still in the works, but much depends on the status of the COVID-19 pandemic. The chair is still attempting to confirm a facilitator. Timing: still looking at late winter (February?) before businesspeople are engaged in preparing for the summer season. The committee will continue planning for this event in collaboration with municipal staff.

**f) Community Planters/Benches - Discussion**

The Chair and another member achieved an informal survey of the existing planters and benches and determined that most were still functional. However, given that there is a good supply of material available for repurposing from an earlier project, it is likely that many existing units can be replaced, as well as new ones constructed for the SCB and Old Mill area. Staff are coming up with designs that will make best use of the existing material.

**g) Old Church on the Hill - Discussion**

A brief discussion about possible uses for the property, with recognition that there are limitations, and that the review/feasibility process is just getting underway.

**h) Digital Business Directory - Discussion**

This was the final discussion on the topic, at least for the foreseeable future – not because it is not a valid idea, but because the committee recognized all the variables inherent in and the limitations that EDC faces in attempting to deal with something probably best handled on an island-wide scale. Ultimately the currency of business information (operating/opening hours, for example). More detail on the considerations of this topic is available in previous monthly minutes.

**9. New Business**

None

**10. Correspondence**

None

**11. Information**

None

**12. Recommendations to Council**

None

**13. Next Meeting:** January 13, 2021, 7:00 pm, Zoom Meetings

**14. Adjournment:** The meeting was adjourned at 8:08 p.m. on a motion by Diane Larocque.



## Phase II Environmental Site Assessment

*The Township of Billings c/o EXP Infrastructure*

**Type of Document:**

Report

**Project Name:**

Main Street Reconstruction  
Kagawong, Ontario

**Project Number:**

SUD-00020031-IC

**Prepared By:**

Perry Sarvas, P.Geo.  
Senior Hydrogeologist, Earth and Environmental Services  
EXP  
885 Regent Street  
Sudbury, Ontario, P3E 5M4  
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**Date Submitted:**

2021-02-17

## Table of Contents

1. Introduction .....	2
1.1 Objective .....	2
1.2 Site Description .....	2
2. Background and Scope of Investigation .....	2
2.1 Site Assessment Criteria.....	3
3. Findings .....	5
3.1 Soil Conditions.....	5
3.2 Soil Quality .....	5
3.3 Groundwater Condition .....	5
3.4 Groundwater Quality .....	6
3.5 Discussion.....	6
4. Conclusions .....	6
5. Recommendations .....	7
6. Limitations .....	7
7. Closure .....	8
Appendix A – Drawings.....	9
Appendix B – Borehole Logs .....	10
Appendix C – Analytical Results Tables and Certificates of Analysis .....	11

## 1. Introduction

EXP Services Inc. (EXP) was retained by the Township of Billings to complete a Phase II Environmental Site Assessment (ESA) of a portion of the Main Street reconstruction project in Kagawong, Ontario ("the Site").

### 1.1 Objective

EXP understands that this Phase II ESA was undertaken to address potential soil and groundwater within the road right of way for the road project. The potential contamination was encountered during field investigations of a geotechnical engineering evaluation at the property.

### 1.2 Site Description

The subject Site is located along Main Street, as shown on Drawing A-1. The St. John the Evangelist church property and the Kagawong marina are northeast adjacent, and the post office property is northwest adjacent. At the time of the investigation, the subject Site mainly contained the roadbed of Main Street with commercial and institutional properties on the east and west sides of the road.

Mudge Bay, on the North Channel of Lake Huron, is located approximately 20 m east of the investigation area.

## 2. Background and Scope of Investigation

During the geotechnical engineering evaluation field investigations, visual evidence of potential petroleum hydrocarbon contamination was observed in the soils beneath the Site. Subsequent investigation provided photographic evidence of a fuel pump (for gasoline and/or diesel) at the location of the former Havelock Hotel at the southwest corner of the Site. No further information was available on when the fuel pump was at this location, when it was removed and whether any contamination remediation was completed.

Based on this observation, EXP recommended completion of a Phase II ESA to investigate the presence of both soil and groundwater contamination.

The scope of work for the Phase II ESA consisted of the following:

- Completion of four (4) environmental boreholes beneath the Site;
- Installation of monitoring wells in all of the boreholes;
- Collect soil samples from the boreholes and submit for analysis of the contaminants of concern;
- Submit the soil samples from all four boreholes for further analysis of pH;
- Collect representative groundwater samples from the monitoring wells and submit for analysis of the contaminants of concern;
- Compare analytical results against applicable criteria; and,
- Prepare a report to document the findings.

EXP personnel who conducted assessment work for this project included Phil Laframboise and Jeff Newman (field technicians), Perry Sarvas (author of the report) and Yves Beauparlant (reviewer of the report).

The borehole drilling was conducted by Landcore Drilling, under the supervision of EXP field technician Phil Laframboise on January 21, 2021. Prior to the commencement of drilling activities, One Call Services inspected the drill locations to identify the locations of underground utilities. The approximate locations of the environmental boreholes are shown on Drawing A-1 in Appendix A.

The objectives of these environmental boreholes were to identify and delineate potential contamination of soil beneath the Site in the vicinity of the potentially contaminated soils identified from the geotechnical investigation. Soil samples were collected from four boreholes (BH-101, BH-102, BH-103 and BH-104).

All boreholes had monitoring wells installed after completion. The wells were constructed of 50 mm Schedule 40 PVC screen and riser. The monitoring wells consisted of a screen and riser, and a flush mounted protective casing at ground surface. The well screen has a slot size of approximately 0.25 mm (slot 10) and was sealed at the base with a PVC end cap. The annular space around the well screen was backfilled with silica sand to an average height of 0.6 meters above the top of the screen. The sand pack was extended slightly above the screen to allow for compaction of the sand pack and expansion of the overlying well seal. A granular bentonite ('Hole Plug') seal was placed in the borehole annulus from the top of the sand pack to approximately ground surface. Lubricants and adhesives were not used when constructing the monitoring well.

Soil samples were collected in general accordance with accepted best management practices and guidelines. Disposable nitrile gloves (i.e., one pair per sample) were used during sample handling. A portion of each soil sample was placed in a sealed "zip-lock" plastic bag and allowed to reach ambient temperature prior to field screening with a combustible vapour meter. The combustible meter was calibrated with hexane reference gas prior to use. The measurements were made by inserting the instrument's probe into the plastic bag while manipulating the sample to ensure volatilization of the soil gases. These readings provide a real-time indication of the relative concentration of combustible vapours encountered in the soil samples and are documented in the borehole logs in Appendix B.

A total of eight (8) soil samples were submitted for laboratory analysis; two each from each of the four boreholes. One sample each (BH-101, BH-102, BH-103 and BH-104) was submitted based on a high combustible vapour reading. One sample each (BH-101b, BH-102b, BH-103b and BH-104b) was collected from the bottom interval of each borehole (3.8 m to 4.6 m below ground surface) to assist vertical delineation of soil contamination. The selected soil samples were submitted to SGS Laboratories for analysis of targeted parameters petroleum hydrocarbons fractions F1 to F4 (PHC (F1-F4)) and volatile organic compounds including the petroleum compounds benzene, toluene, ethylbenzene and xylenes (BTEX). The soil analytical results are presented in the laboratory Certificates of Analysis for the tested soil samples in Appendix C.

Prior to groundwater sampling, headspace vapour levels within the monitoring wells were measured and recorded. Each well was then sampled using low-flow sampling technique with a Geotech Geopump. The wells were purged to remove stagnant groundwater and allowed to recover prior to sample collection. The purge water was also continuously monitored for visual and olfactory evidence of petroleum impact (sheen and odour).

The groundwater samples were collected into laboratory-provided sample bottles and submitted to SGS Laboratories for analysis of BTEX and PHC F1 to F4.

## 2.1 Site Assessment Criteria

The assessment criteria, Site Condition Standards (SCS), applicable to a given site in Ontario are established under subsection 168.4(1) of the Environmental Protection Act. Tabulated generic criteria are provided in "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" ("the SGWS Standards"), Ministry of the Environment and Climate Change (MOECC), April 15, 2011. These criteria, which came into force on July 1, 2011, are based on site sensitivity (sensitive or non-sensitive), groundwater use (potable or non-potable), property use (residential, parkland,

institutional, commercial, industrial, community and agricultural/other), soil type (coarse or medium/fine textured) and restoration depth (full or stratified restoration). In addition, site specific criteria may be established on the basis of the findings of a Risk Assessment carried out in accordance with Part IX and Schedule C of Ontario Regulation 153/04 (O.Reg. 153/04) as amended by Ontario Regulation 511/09 (O.Reg. 511/09).

The SGWS Standards specify SCS for soil, groundwater and sediment that are tabulated as follows:

Table 1 - applicable to sites where background concentrations must be met (full depth) such as sensitive sites where site-specific criteria have not been derived;

Table 2 - applicable to sites with potable groundwater and full depth restoration;

Table 3 - applicable to sites with non-potable groundwater and full depth restoration;

Table 4 - applicable to sites with potable groundwater and stratified restoration;

Table 5 - applicable to sites with non-potable groundwater and stratified restoration;

Table 6 - applicable to sites with less than 2 m of overburden above bedrock in a potable groundwater condition;

Table 7 - applicable to sites with less than 2 m of overburden above bedrock in non-potable groundwater condition;

Table 8 - applicable to sites within 30 m of a water body in a potable groundwater condition;

Table 9 - applicable to sites within 30 m of a water body in a non-potable groundwater condition

For assessment purposes, EXP selected the Table 9 SCS for a Non-Potable Groundwater Scenario and the property within 30 m of a water body. The selection of this category was based on the following factors:

- The Site was not considered a sensitive site because pH in soil samples from the Site was greater than 5 and less than 9, and the Site was not within 30 m of a known area of natural significance;
- The Site was considered to be within 30 m of Lake Huron;
- The Site and adjacent properties were assumed to be serviced by a municipal water supply, so groundwater beneath the Site was considered to be non-potable;
- The Site was located in an area of commercial, institution, residential and community use and it is assumed that there is no intention to change the designated land use;
- Based on results of borehole drilling, less than one-third of the Site is assumed to be underlain by soil equal to or less than 2 m in depth beneath the soil surface; and,
- There was no intention to carry out a stratified restoration at the Site.



### 3. Findings

#### 3.1 Soil Conditions

Soils encountered in the boreholes are described in the borehole logs in Appendix B. In general, the boreholes encountered surface treatment asphalt overlying cohesionless fill materials and native sand.

The surface treatment asphalt was encountered at the surface of BH-101, BH-102 and BH-103 and was approximately 50 mm thick.

Underlying the surface treatment was a sand fill base layer ranging from 0.7 m to 1.4 m thick. The sand fill was with gravel and with silt and was dark brown in colour, and moist. A petroleum hydrocarbon odour was recorded in the fill in BH-101 but not in the fill from the other boreholes.

Below the silty sand fill was sand fill that extended from 3.8 m to 4.6 m depth. The sand fill contained some silt and trace to some gravel and was brown to black stained in colour. The fill was moist becoming wet with depth. A petroleum hydrocarbon odour was recorded in this unit in BH-101 and BH-102 but not in the fill from the other boreholes.

Below the sand fill, a native sand and gravel unit was encountered in only BH-102 at depth of 3.8 m extending to 4.6 m. The sand was with gravel and some silt and was brown in colour and wet. Of note, the visual review of the sand sample suggests that it may possibly be fill. A petroleum hydrocarbon odour was recorded in this unit.

#### 3.2 Soil Quality

Table 3.1 in Appendix C summarizes analytical results for soil samples. The Table 9 SCS for PHC F1 and F2, hexane and the BTEX compounds ethylbenzene, toluene and xylenes were exceeded in soil samples from BH-101, and BH-102. The Table 9 SCS for PHC F1 and F2 and for xylenes were exceeded in soil sample from BH-103. The Table 9 SCS for xylenes was exceeded in soil sample from BH-104. The Table 9 SCS not exceeded in any of the other soil samples. The soil analytical results are presented in the laboratory Certificates of Analysis for the tested soil samples in Appendix C.

Strong hydrocarbon odours were noted in soil samples obtained within boreholes BH-101 and BH-102. Results in the deeper samples (BH-101b and BH-102b) show significantly lower contaminant levels than the higher samples. This indicated that most of the soil contamination is within the upper part of fill materials. However, the contaminant levels in BH-101b and BH-102b indicate that soil contamination extends deeper than 4.6 m below ground surface.

The soil contamination is consistent with the release of gasoline or diesel at the Site at a location near the former fuel pump at the Havelock Hotel.

#### 3.3 Groundwater Condition

Groundwater was encountered in all of the monitoring wells. Static water levels measured on January 21, 2021 showed depths to groundwater ranging from 1.98 m to 2.41 m below ground surface.

Groundwater elevations ranged from 97.78 m (BH-101) to 97.67 m (BH-104). Predictably, the groundwater elevations indicate that lateral groundwater flow beneath the Site is to the north-northeast toward Mudge Bay. Drawing A-2 shows groundwater elevations and predicted groundwater flow direction.

### 3.4 Groundwater Quality

Table 3.2 in Appendix C summarizes analytical results for groundwater samples. The Table 9 SCS for PHC F1 and F2 were exceeded in groundwater samples from BH-101, BH-102 and BH-103. The Table 9 SCS for hexane, ethylbenzene, toluene and xylenes were exceeded in groundwater samples from BH-101 and the Table 9 SCS for hexane was exceeded in the groundwater sample from BH-103. No Table 9 SCS was exceeded in the groundwater sample from BH-104. The groundwater analytical results are presented in the laboratory Certificates of Analysis in Appendix C.

The results indicate that groundwater from BH-101 shows the highest levels of contamination, although both BH-102 and BH-103 also have significant groundwater contamination. The groundwater contamination is consistent with the release of gasoline or diesel at the Site at a location near the former fuel pump at the Havelock Hotel.

### 3.5 Discussion

Results include the presence of both soil and groundwater contamination beneath the Site. The contaminants are identified as PHC F1 and F2, ethylbenzene, toluene, xylenes and n-hexane. Among other uses, n-hexane is a common additive to gasoline. Its presence is ascribed to the presence of gasoline contamination.

Highest levels of soil and groundwater contamination appear to be centred in the roadbed of Main Street. The highest level of soil contamination was encountered in the shallow soil sample (2.3 m – 3.0 m below ground surface) from BH-102. The highest level of groundwater contamination was encountered in BH-101. Both boreholes are downgradient of the former Havelock Hotel property.

The soil and groundwater contamination has not been fully delineated both laterally and vertically. Samples from BH-104 recorded only a low level of xylene contamination in soil and no groundwater contamination. However, significant soil and groundwater contamination in BH-101, BH-102 and BH-103 indicates the contamination needs to be further delineated to the north, south, east and west. Also, contamination in soil samples BH-101b and BH-102b indicates that soil contamination needs to be further delineated beyond a depth of 4.6 m.

The soil and groundwater contamination found at the Site is consistent with the release of gasoline or diesel at the location of the former fuel pump at the Havelock Hotel. However, other potential sources cannot be discounted. A Phase I ESA was not completed and other potential contaminating activities were not documented. Other potential sources include past spills and undocumented underground or above-ground storage tanks (USTs and ASTs) on adjacent properties.

## 4. Conclusions

EXP completed a Phase II ESA at the property located at the Main Street reconstruction site in Kagawong, Ontario. The purpose of the Phase II ESA was to address potential environmental issues from potential soil contamination that were identified from a geotechnical investigation completed in January 2021. Conclusions from findings of the Phase II ESA are:

- The Site is generally underlain by sand fill material over native sand soils.
- Groundwater was encountered in soils beneath the Site in all four of the monitoring wells installed at the Site. Groundwater was measured a static level from 1.98 m to 2.41 m below ground surface. Groundwater elevations were estimated to range from 97.78 m to 97.67 m and indicate that lateral groundwater flow beneath the Site is to the north-northeast toward Mudge Bay.
- For assessment purposes, EXP selected MECP Table 9 Site Condition Standards (SCS) for property with a non-potable groundwater condition and within 30 m of a water body.

- Results indicated exceedances of Table 9 SCS for PHC F1 and F2, hexane, ethylbenzene, toluene and xylenes in the soil sample from the Site. Table 9 SCS exceedances were recorded in soils from all four boreholes.
- Results indicated exceedances of Table 2 SCS for PHC F1 and F2, hexane, ethylbenzene, toluene and xylenes were exceeded in groundwater samples from the Site. Table 9 SCS exceedances were recorded in groundwater samples from all monitoring wells except for BH-104.
- The Table 9 SCS were not exceeded for any other parameter in the soil and groundwater samples submitted for analysis.
- The results confirm the potential presence of soil and groundwater contamination beneath the Site.

The extent of soil and groundwater contamination has not been delineated laterally or vertically.

## 5. Recommendations

Based on the Phase II ESA findings, further activities are recommended to address the potential soil and groundwater contamination at the Site. EXP recommends development of a workplan to excavate contaminated soils from impacted areas of the reconstruction project and to complete confirmatory soil sampling of the excavated areas to determine the effectiveness of contaminated soil excavations. Impacted soils should be managed per the provincial *On-Site and Excess Soil Management Regulation* (Ontario Regulation 406/19). Based on known conditions and construction requirements, it is assumed that less than 1,000 m<sup>3</sup> of impacted soils would need to be managed. It is assumed that excess soil (soil no longer required for construction or deemed too contaminated for reuse) would be transported for disposal at a nearby landfill site. It should be assumed that at least one representative sample of excavated soil would be submitted for analysis of PHC (F1-F2), BTEX and PAH compounds. At least two soil samples (including a representative sample and a blind duplicate of this sample) would need to be submitted for metals and inorganics and three samples would need to be submitted for landfill TCLP analysis.

Groundwater encountered at the Site during reconstruction should not be discharged directly to the natural environment. The groundwater should be captured in a waterproof container and managed appropriately. Options include:

- Groundwater could be immediately removed from the Site by a licenced contractor for disposal at a licenced facility.
- Representative groundwater samples from the containers could be tested for contaminant levels. Based on results, groundwater could either be discharged directly on-Site to the natural environment or removed from the Site by a licenced contractor for disposal at a licenced facility.
- A licenced contractor could be retained to operate a groundwater pump-and-treatment system that would allow direct discharge on-Site to the natural environment

## 6. Limitations

This report has been prepared and the work referred to in this report has been undertaken by EXP Services Inc. (EXP) for the Township of Billings. It is intended for the sole and exclusive use of the Township of Billings. Any use, reliance on or decision made by any person other than the Township of Billings based on this report is the sole responsibility of such other person.

The Township of Billings and EXP make no representation or warranty to any other person with regard to this report and the work referred to in this report and they accept no duty of care to any other person or any liability or responsibility whatsoever for any losses, expenses, damages, fines, penalties, or other harm that may be suffered or incurred by any other person as a

*Project Number: SUD-00020031-IC**Date: February 17, 2021*

result of the use of, reliance on, any decision made or any action taken based on this report or the work referred to in this report.

The investigation undertaken by EXP with respect to this report and any conclusions or recommendations made in this report reflect EXP's judgement based on the site conditions observed at the time of the site inspection on the date(s) set out in this report and on information available at the time of preparation of this report. This report has been prepared for specific application to this site and it is based, in part, upon visual observation of the site, subsurface investigation at discrete locations and depths, and specific analysis of specific chemical parameters and materials during a specific time interval, all as described in this report. Unless otherwise stated, the findings cannot be extended to previous or future site conditions, portions of the site which were unavailable for direct investigation, subsurface locations which were not investigated directly, or chemical parameters, materials or analysis which were not addressed. Substances other than those addressed by the investigation described in this report may exist within the site, substances addressed by the investigation may exist in areas of the site not investigated and concentrations of substances addressed which are different than those reported may exist in areas other than the locations from which the samples were taken.

If site conditions or applicable standards change or if any additional information becomes available at a future date, modifications to the findings, conclusions and recommendations in this report may be necessary.

Other than by the Township of Billings, copying or distribution of this report or the use of or reliance on the information contained herein, in whole or in part, is not permitted without the express written permission of EXP. Nothing in this report is intended to constitute or provide a legal opinion.

## 7. Closure

We trust that these comments provide you with sufficient information to proceed. Should you have any questions, please do not hesitate to contact this office.

Yours truly,

EXP Services Inc.



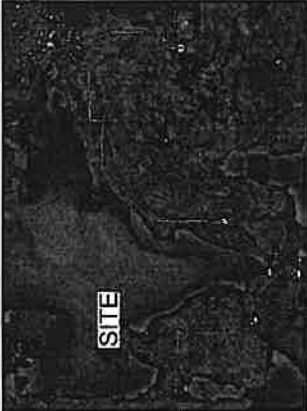
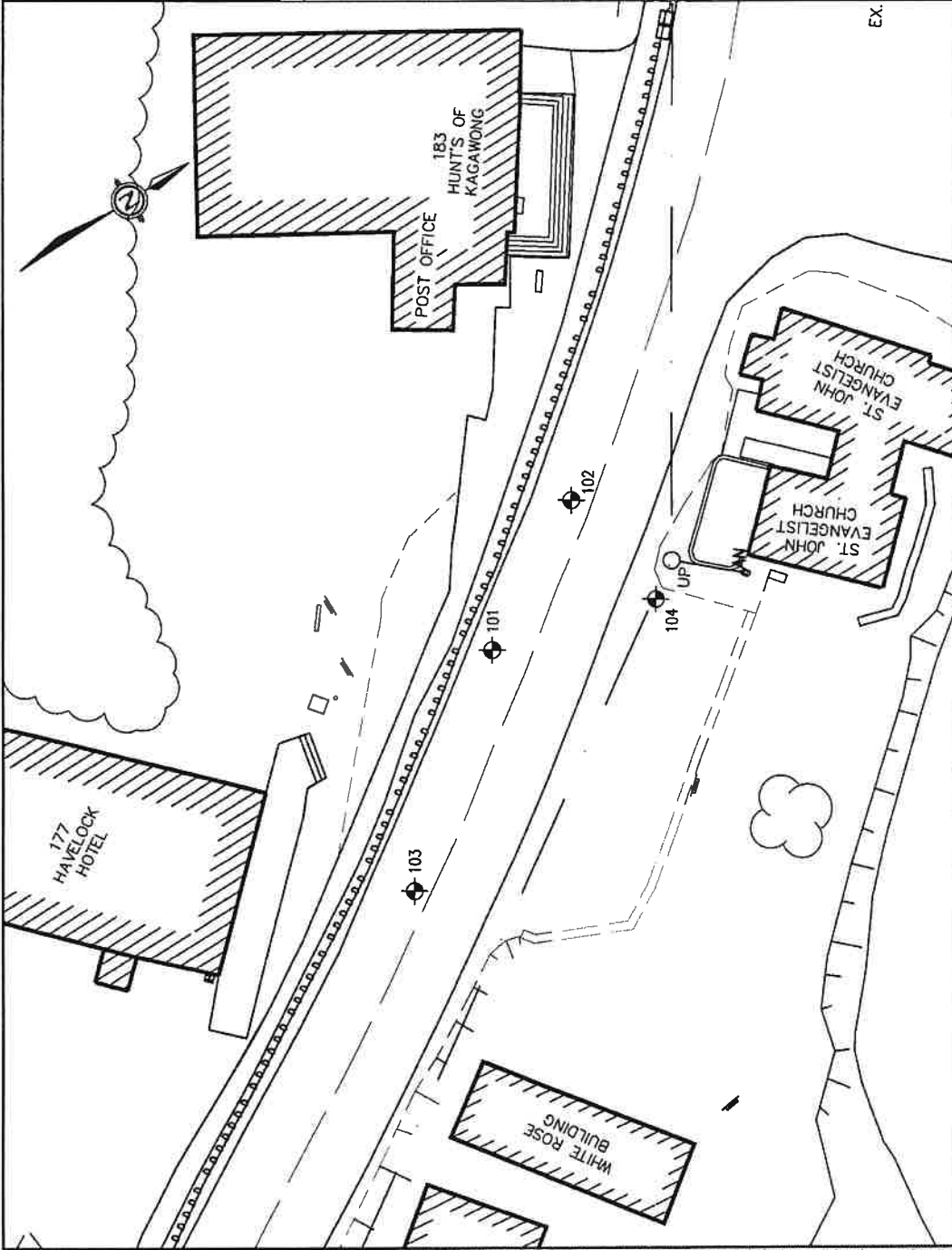
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Yves Beauparlant, P.Eng.  
Manager, Earth & Environmental Services  
Northeastern Ontario

*Project Number: SUD-00020031-IC*  
*Date: February 17, 2021*

## Appendix A – Drawings



KEYPLAN - N.T.S.

**LEGEND**

EXP BOREHOLE AND GROUNDWATER MONITORING WELL

**NOTES**

- 1) The boundaries and soil types have been established only of Test Hole locations. Between Test Holes, they are assumed and may be subject to considerable error.
- 2) Do not use Test Hole elevations for design purposes.
- 3) Soil samples will be retained in storage for 3 months and then destroyed unless client advises that an extended time period is required.
- 4) Quantities should not be established from the information provided at the Test Hole locations.
- 5) This drawing forms part of the report, project number as indicated, and should be used only in conjunction with this report.

 EXP Services Inc. Bathurst Branch 1 • 705.674.4491 (t) • 705.674.5543 485 Regent Street Bathurst, ON J0E 1B4 Canada www.exp.com		THE TOWNSHIP OF BILLINGS PROJECT: MAIN STREET - ENVIRONMENTAL REVIEW KAGAWONG, ONTARIO PROJECT NO: SUD-00020031-C		DATE: FEBRUARY 2021	SCALE: N.T.S.	DATE: 04/02/21	BY: A-1
REVISIONS							
NO.	DATE	DESCRIPTION					

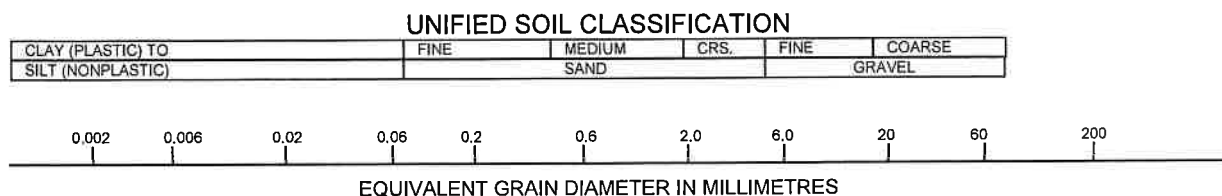


## Appendix B – Borehole Logs



## Notes on Sample Descriptions

1. All sample descriptions included in this report follow the International Society for Soil Mechanics and Foundation Engineering (ISSMFE), as outlined in the Canadian Foundation Engineering Manual. Note, however, that behavioral properties (i.e. plasticity, permeability) take precedence over particle gradation when classifying soil. Please note that, with the exception of those samples where a grain size analysis has been made, all samples are classified visually. Visual classification is not sufficiently accurate to provide exact grain sizing or precise differentiation between size classification systems.



**ISSMFE SOIL CLASSIFICATION**

CLAY	SILT			SAND			GRAVEL			COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE		

2. **Fill:** Where fill is designated on the borehole log it is defined as indicated by the sample recovered during the boring process. The reader is cautioned that fills are heterogeneous in nature and variable in density or degree of compaction. The borehole description may therefore not be applicable as a general description of site fill materials. All fills should be expected to contain obstruction such as wood, large concrete pieces or subsurface basements, floors, tanks, etc., none of these may have been encountered in the boreholes. Since boreholes cannot accurately define the contents of the fill, test pits are recommended to provide supplementary information. Despite the use of test pits, the heterogeneous nature of fill will leave some ambiguity as to the exact composition of the fill. Most fills contain pockets, seams, or layers of organically contaminated soil. This organic material can result in the generation of methane gas and/or significant ongoing and future settlements. Fill at this site may have been monitored for the presence of methane gas and, if so, the results are given on the borehole logs. The monitoring process does not indicate the volume of gas that can be potentially generated nor does it pinpoint the source of the gas. These readings are to advise of the presence of gas only, and a detailed study is recommended for sites where any explosive gas/methane is detected. Some fill material may be contaminated by toxic/hazardous waste that renders it unacceptable for deposition in any but designated land fill sites; unless specifically stated the fill on this site has not been tested for contaminants that may be considered toxic or hazardous. This testing and a potential hazard study can be undertaken if requested. In most residential/commercial areas undergoing reconstruction, buried oil tanks are common and are generally not detected in a conventional geotechnical site investigation.
3. **Till:** The term till on the borehole logs indicates that the material originates from a geological process associated with glaciation. Because of this geological process the till must be considered heterogeneous in composition and as such may contain pockets and/or seams of material such as sand, gravel, silt or clay. Till often contains cobbles (75 to 200 mm) or boulders (over 200 mm). Contractors may therefore encounter cobbles and boulders during excavation, even if they are not indicated by the borings. It should be appreciated that normal sampling equipment cannot differentiate the size or type of any obstruction. Because of the horizontal and vertical variability of till, the sample description may be applicable to a very limited zone; caution is therefore essential when dealing with sensitive excavations or dewatering programs in till materials.

## Notes On Soil Descriptions

4. The following table gives a description of the soil based on particle sizes. With the exception of those samples where grain size analyses have been performed, all samples are classified visually. The accuracy of visual examination is not sufficient to differentiate between this classification system or exact grain size.

Soil Classification		Terminology	Proportion
Clay and Silt	<0.060 mm	"trace" (e.g. Trace sand)	1% to 10%
Sand	0.060 to 2.0 mm	"some" (e.g. Some sand)	10% to 20%
Gravel	2.0 to 75 mm	adjective (e.g. sandy, silty)	20% to 35%
Cobbles	75 to 200 mm	"and" (e.g. and sand)	35% to 50%
Boulders	>200 mm		

The compactness of Cohesionless soils and the consistency of the cohesive soils are defined by the following:

Cohesionless Soil		Cohesive Soil		
Compactness	Standard Penetration Resistance "N" Blows / 0.3 m	Consistency	Undrained Shear Strength (kPa)	Standard Penetration Resistance "N" Blows / 0.3 m
Very Loose	0 to 4	Very soft	<12	<2
Loose	4 to 10	Soft	12 to 25	2 to 4
Compact	10 to 30	Firm	25 to 50	4 to 8
Dense	30 to 50	Stiff	50 to 100	8 to 15
Very Dense	Over 50	Very Stiff	100 to 200	15 to 30
		Hard	>200	>30

### 5. ROCK CORING

Where rock drilling was carried out, the term RQD (Rock Quality Designation) is used. The RQD is an indirect measure of the number of fractures and soundness of the rock mass. It is obtained from the rock cores by summing the length of the core covered, counting only those pieces of sound core that are 100 mm or more length. The RQD value is expressed as a percentage and is the ratio of the summed core lengths to the total length of core run. The classification based on the RQD value is given below.

RQD Classification	RQD (%)
Very Poor Quality	<25
Poor Quality	25 to 50
Fair Quality	50 to 75
Good Quality	75 to 90
Excellent Quality	90 to 100

$$\text{Recovery Designation \% Recovery} = \frac{\text{Length of Core Per Run}}{\text{Total Length of Run}} \times 100$$

# Log of Borehole BH-101

Project No. SUD-00020031-IC

Figure No. 1

Project: Main Street - Environmental Review

Sheet No. 1 of 1

Location: Kagawong, ON

Date Drilled: January 21, 2021

Auger Sample

Combustible Vapour Reading

Drill Type: Truck Mounted CME 75

SPT (N) Value

Natural Moisture

Datum: Non-Geodetic (100.0 m)

Dynamic Cone Test

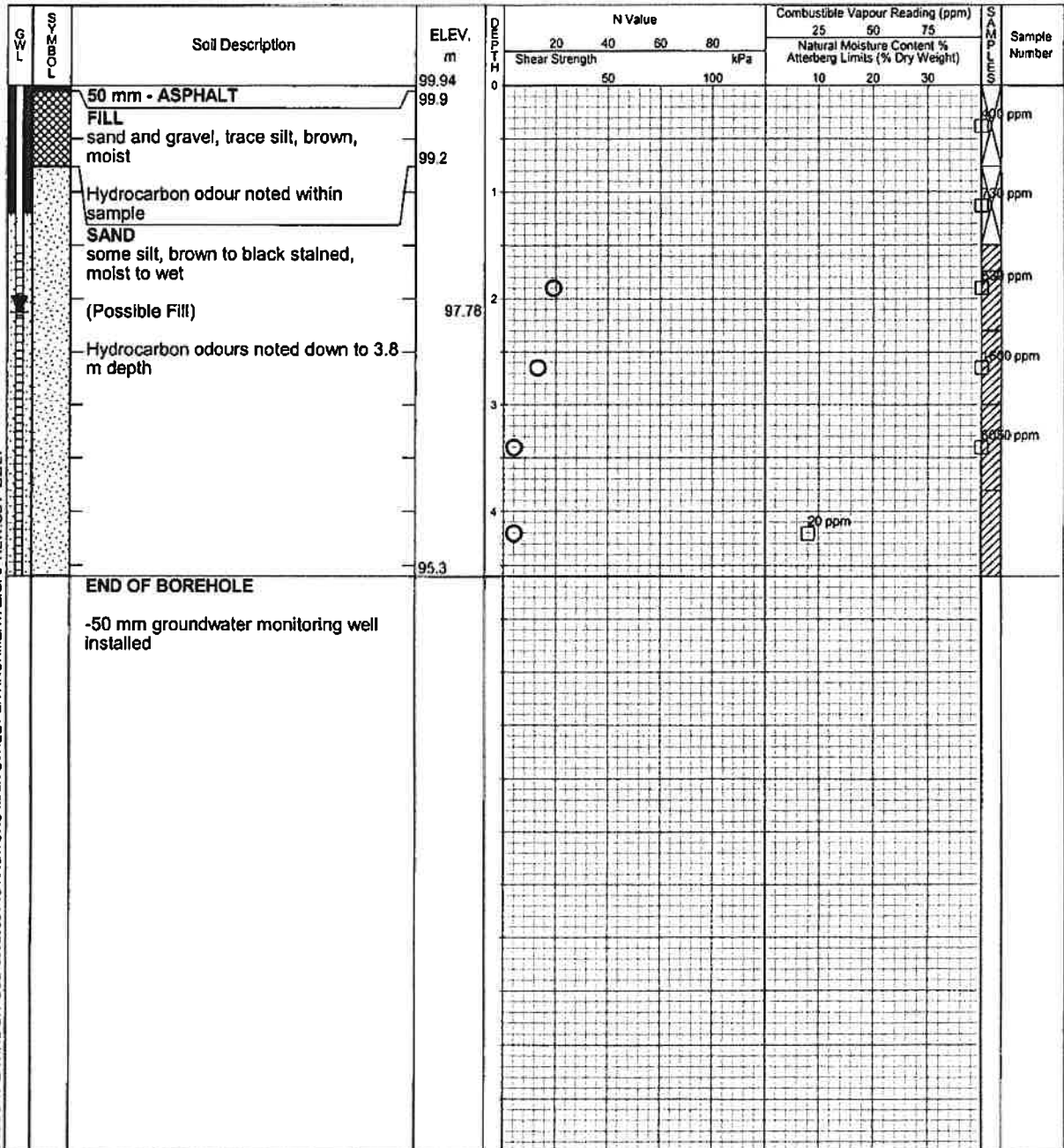
Plastic and Liquid Limit

Shelby Tube

Undrained Triaxial at % Strain at Failure

Field Vane Test

Penetrometer



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CANADA

Borehole data requires  
interpretation assistance from  
exp before use by others.

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	2.14	N/A
January 22, 2021	2.16	N/A

# Log of Borehole BH-102

Project No. SUD-00020031-IC

Figure No. 2

Project: Main Street - Environmental Review

Sheet No. 1 of 1

Location: Kagawong, ON

Date Drilled: January 21, 2021

Auger Sample

SPT (N) Value

Dynamic Cone Test

Shelby Tube

Field Vane Test

Combustible Vapour Reading

Natural Moisture

Plastic and Liquid Limit

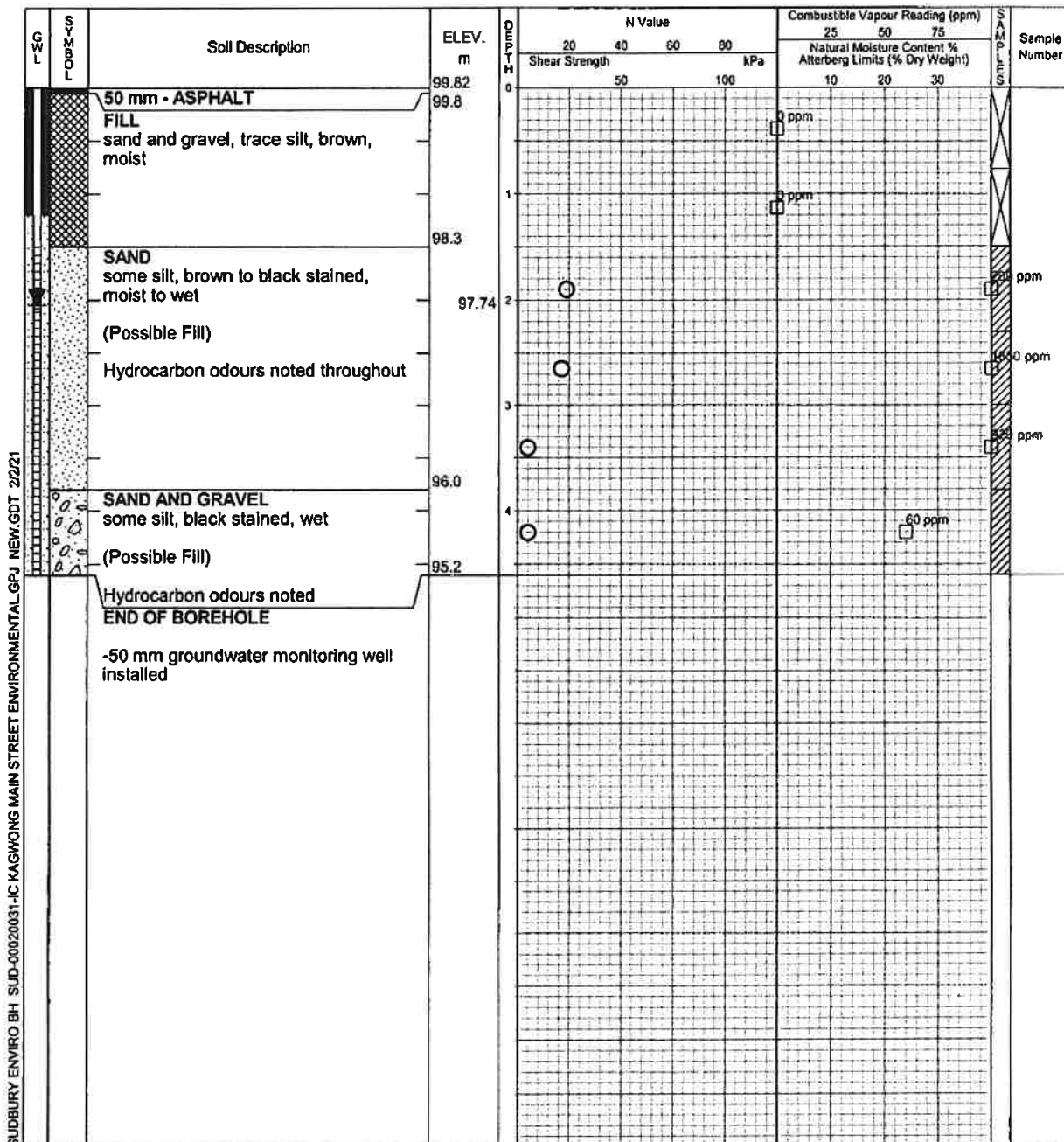
Undrained Triaxial at

% Strain at Failure

Penetrometer

Drill Type: Truck Mounted CME 75

Datum: Non-Geodetic (100.0 m)



# Log of Borehole BH-103

Project No. SUD-00020031-IC

Figure No. 3

Project: Main Street - Environmental Review

Sheet No. 1 of 1

Location: Kagawong, ON

Date Drilled: January 21, 2021

Auger Sample

Combustible Vapour Reading

Drill Type: Truck Mounted CME 75

SPT (N) Value

Natural Moisture

Datum: Non-Geodetic (100.0 m)

Dynamic Cone Test

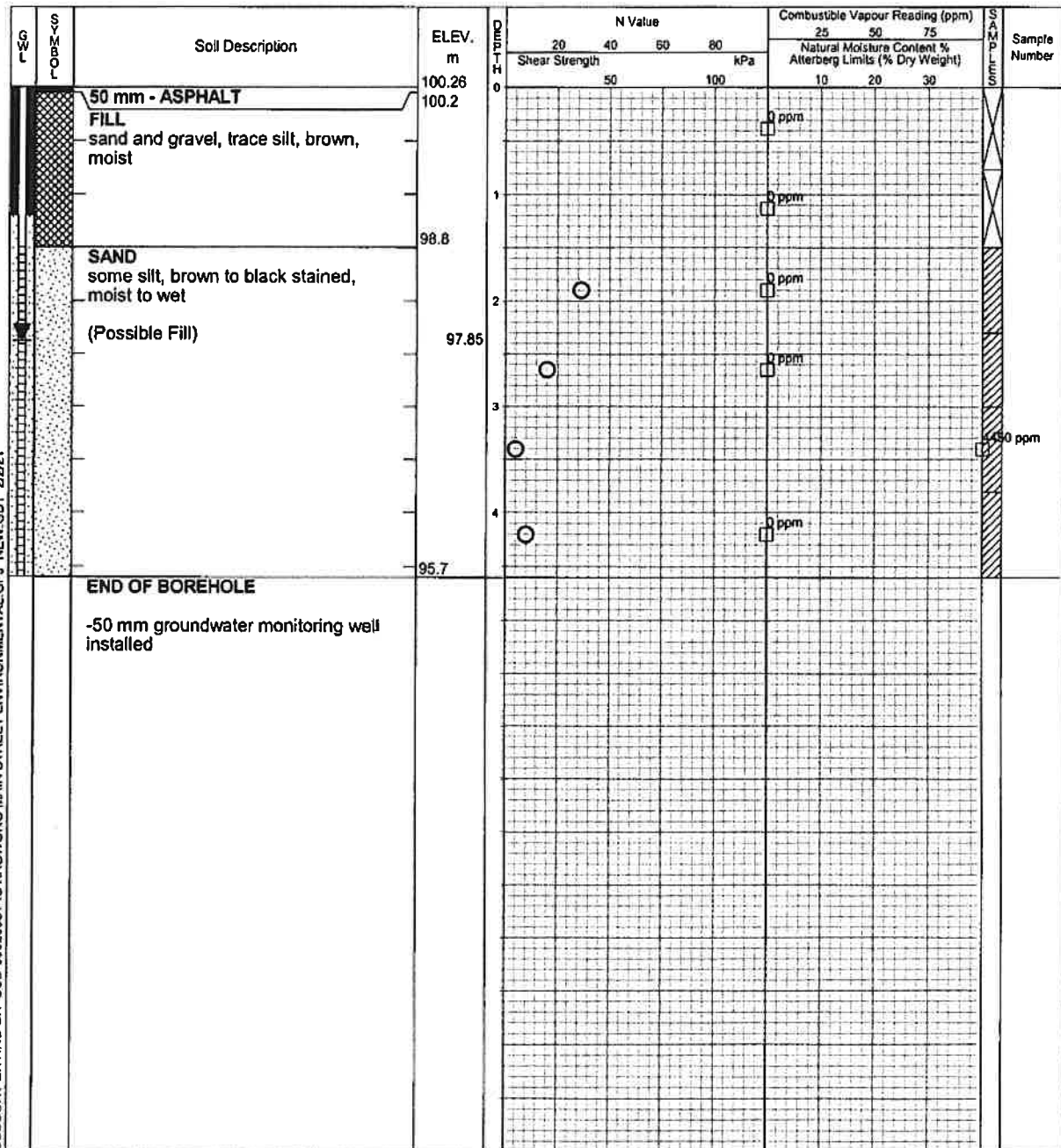
Plastic and Liquid Limit

Shelby Tube

Undrained Triaxial at % Strain at Failure

Field Vane Test

Penetrometer



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CANADA

Borehole data requires interpretation assistance from exp before use by others.

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	2.39	N/A
January 22, 2021	2.61	N/A

# Log of Borehole BH-104

Project No. SUD-00020031-IC

Figure No. 4

Project: Main Street - Environmental Review

Sheet No. 1 of 1

Location: Kagawong, ON

Date Drilled: January 22, 2021

Auger Sample

Combustible Vapour Reading

Drill Type: Truck Mounted CME 75

SPT (N) Value

Natural Moisture

Datum: Non-Geodetic (100.0 m)

Dynamic Cone Test

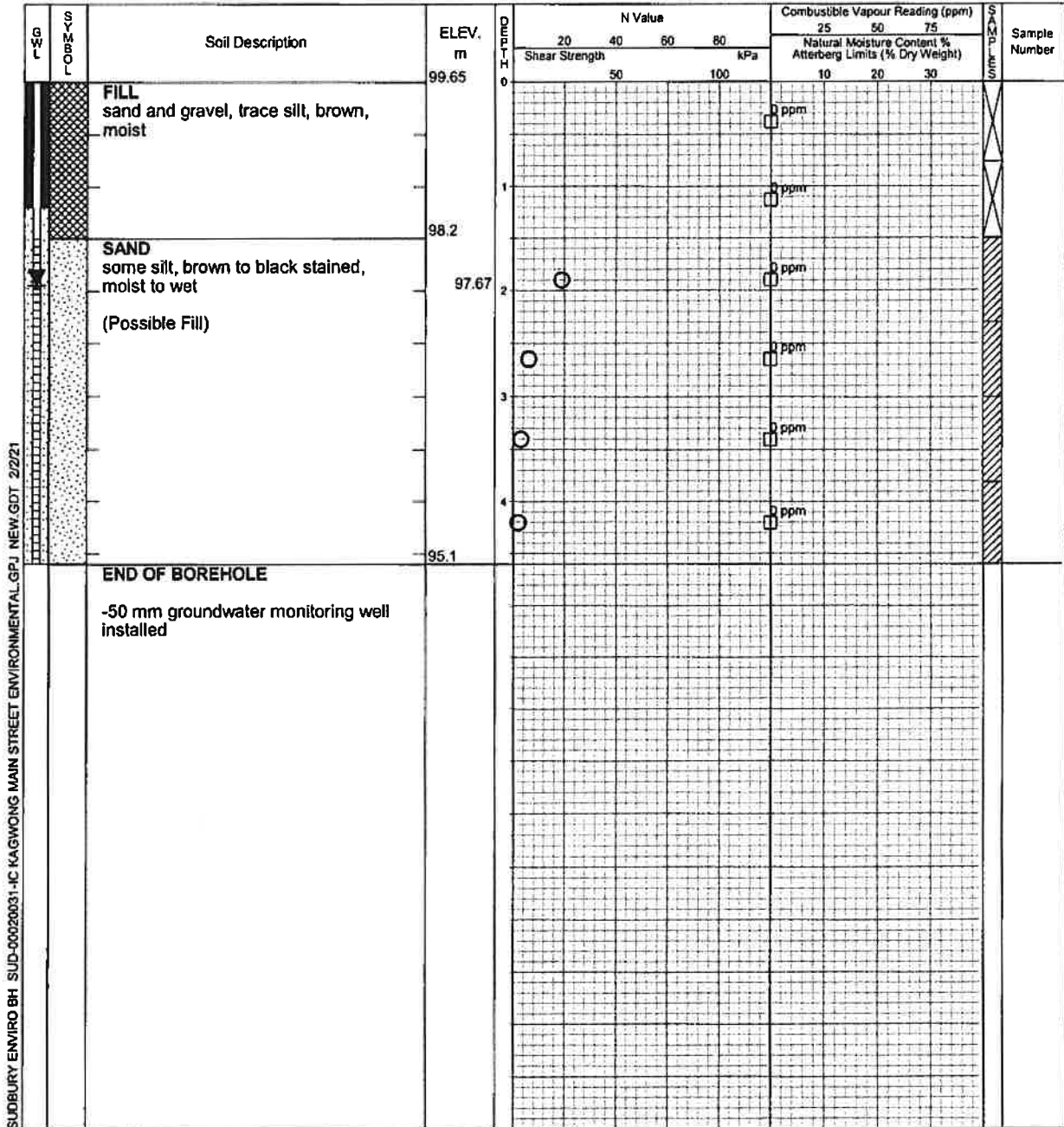
Plastic and Liquid Limit

Shelby Tube

Undrained Triaxial at % Strain at Failure

Field Vane Test

Penetrometer



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CANADA

Borehole data requires  
interpretation assistance from  
exp before use by others.

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	1.98	N/A
January 22, 2021	1.98	N/A

## Appendix C – Analytical Results Tables and Certificates of Analysis



Table 3.1. Soil Sample Analytical Results

Parameter	Table 9 SCS	Units	BH1	BH1-b	BH2	BH2-b	BH3	BH3-b	BH4	BH4-b
<b>PHCs and BTEX</b>										
PHC F1	25	µg/g	967	< 10	3510	28	330	< 10	17	< 10
PHC F2	10	µg/g	462	12	2420	15	149	< 10	< 10	< 10
PHC F3	240	µg/g	< 50	< 50	81	< 50	< 50	< 50	< 50	< 50
PHC F4	120	µg/g	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Benzene	0.02	µg/g	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Ethylbenzene	0.05	µg/g	10.2	< 0.05	95.6	0.11	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	0.2	µg/g	0.21	< 0.05	4.57	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Xylene Mixture	0.05	µg/g	66.2	0.07	511	0.72	0.14	< 0.05	0.26	< 0.05
<b>VOCs</b>										
Bromodichloromethane	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromoform	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibromochloromethane	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tetrachloroethane, 1,1,1,2-	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethane, 1,1,1-	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tetrachloroethane, 1,1,2,2-	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethane, 1,1,2-	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dichloroethane, 1,1-	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dichloroethylene, 1,1-	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dichlorobenzene, 1,2-	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dichloroethane, 1,2-	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dichloropropane, 1,2-	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dichlorobenzene, 1,3-	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dichloropropene, 1,3-	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dichlorobenzene, 1,4-	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acetone	0.5	µg/g	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Carbon Tetrachloride	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chlorobenzene	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chloroform	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dichloroethylene, 1,2-cis-	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dichloroethylene, 1,2-trans-	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dichlorodifluoromethane	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethylene dibromide	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Methyl Ethyl Ketone	0.5	µg/g	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Methyl Isobutyl Ketone	0.5	µg/g	< 0.5	< 1	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 0.5
Methyl tert-Butyl Ether (MTBE)	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Methylene Chloride	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexane (n)	0.05	µg/g	12	< 0.05	1.42	0.1	3.04	< 0.05	< 0.05	< 0.05
Styrene	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tetrachloroethylene	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethylene	0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Trichlorofluoromethane	0.25	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Vinyl Chloride	0.02	µg/g	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
<b>METALS and pH</b>										
Antimony	1.3	µg/g	< 0.8		< 0.8		< 0.8		< 0.8	
Arsenic	18	µg/g	2.5		3		2.7		3.2	
Barium	220	µg/g	12		14		12		22	
Beryllium	2.5	µg/g	0.22		0.23		0.2		0.21	
Boron (total)	36	µg/g	10		12		10		12	
Boron (Hot Water Soluble)	1.5	µg/g	< 0.5		< 0.5		< 0.5		< 0.5	
Cadmium	1.2	µg/g	0.03		0.02		< 0.02		0.09	
Chloride	NV	µg/g								
Chromium Total	70	µg/g	7.3		8.6		6.8		7.8	
Chromium VI	0.66	µg/g	< 0.2		< 0.2		< 0.2		< 0.2	
Cobalt	22	µg/g	3.2		3.4		3		3	
Copper	92	µg/g	6.9		7.5		5.9		9.1	
Cyanide (CN-)	0.051	µg/g	< 0.05		< 0.05		< 0.05		< 0.05	
Electrical Conductivity (mS/cm)	0.7	mS/cm	0.19		0.25		0.14		0.27	
Lead	120	µg/g	26		7.6		5		25	
Mercury	0.27	µg/g	< 0.05		< 0.05		< 0.05		< 0.05	
Molybdenum	2	µg/g	< 0.1		0.1		< 0.1		0.2	
Nickel	82	µg/g	6.4		6.7		5.8		6.7	
Selenium	1.5	µg/g	< 0.7		< 0.7		< 0.7		< 0.7	
Silver	0.5	µg/g	< 0.05		0.06		0.05		0.19	
Sodium	NV	µg/g								
Sodium Adsorption Ratio	5		0.5		0.7		0.3		1.3	
Thallium	1	µg/g	0.03		0.03		0.03		0.04	
Uranium	2.5	µg/g	0.28		0.27		0.23		0.31	
Vanadium	86	µg/g	11		11		10		11	
Zinc	290	µg/g	13		13		11		24	
pH	NV	unit	7.66	7.87	8.16		8.31		8.29	



Table 3.2. Groundwater Sample Analytical Results

Parameter	Table 9 SCS	Units	BH1	BH2	BH3	BH4
PHCs and BTEX						
PHC F1	420	µg/L	<b>28800</b>	<b>8150</b>	<b>1750</b>	106
PHC F2	150	µg/L	<b>5060</b>	<b>4640</b>	<b>379</b>	< 100
PHC F3	500	µg/L	< 200	< 200	< 200	< 200
PHC F4	500	µg/L	< 200	< 200	< 200	< 200
Benzene	44	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	1800	µg/L	594	175	0.5	< 0.5
Toluene	14000	µg/L	36.2	5.4	< 0.5	< 0.5
Xylene Mixture	3300	µg/L	<b>5700</b>	1280	7.2	< 0.5
VOCs						
Bromodichloromethane	67000	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	380	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	65000	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethane, 1,1,1,2-	3.3	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethane, 1,1,1-	640	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethane, 1,1,2,2-	3.2	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethane, 1,1,2-	4.7	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Dichloroethane, 1,1-	320	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Dichloroethylene, 1,1-	1.6	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorobenzene, 1,2-	4600	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Dichloroethane, 1,2-	1.6	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Dichloropropane, 1,2-	16	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorobenzene, 1,3-	7600	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Dichloropropene, 1,3-	5.2	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorobenzene, 1,4-	8	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Acetone	100000	µg/L	< 30	< 30	< 30	< 30
Bromomethane	5.6	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.79	µg/L	< 0.2	< 0.2	< 0.2	< 0.2
Chlorobenzene	500	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	2.4	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Dichloroethylene, 1,2-cis-	1.6	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Dichloroethylene, 1,2-trans-	1.6	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	3500	µg/L	< 2	< 2	< 2	< 2
Ethylene dibromide	0.25	µg/L	< 0.2	< 0.2	< 0.2	< 0.2
Methyl Ethyl Ketone	470000	µg/L	< 20	< 20	< 20	< 20
Methyl Isobutyl Ketone	140000	µg/L	< 20	< 20	< 20	< 20
Methyl tert-Butyl Ether (MTBE)	190	µg/L	< 2	< 2	< 2	< 2
Methylene Chloride	610	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Hexane (n)	51	µg/L	<b>95</b>	39.6	<b>72.9</b>	< 1
Styrene	1300	µg/L	3.2	< 0.5	< 0.5	< 0.5
Tetrachloroethylene	1.6	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethylene	1.6	µg/L	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	2000	µg/L	< 5	< 5	< 5	< 5
Vinyl Chloride	0.5	µg/L	< 0.2	< 0.2	< 0.2	< 0.2

**SGS**



## **FINAL REPORT**

**CA15362-JAN21 R**

**SUD-00020031-IC**

Prepared for

**EXP Services Inc**



# FINAL REPORT

CA15362-JAN21 R

## First Page

### CLIENT DETAILS

Client **EXP Services Inc**

Address **885 Regent Street  
Sudbury, Ontario  
P3E 5M4, Canada**

Contact **Jeff Newman**

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Project **SUD-00020031-IC**

Order Number

Samples **Ground Water (5)**

### LABORATORY DETAILS

Project Specialist **Brad Moore Hon. B.Sc**

Laboratory **SGS Canada Inc.**

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Email **brad.moore@sgs.com**

SGS Reference **CA15362-JAN21**

Received **01/27/2021**

Approved **02/03/2021**

Report Number **CA15362-JAN21 R**

Date Reported **02/03/2021**

### COMMENTS

CCME Method Compliance: Analyses were conducted using analytical procedures that comply with the Reference Method for the CWS for Petroleum Hydrocarbons in Soil and have been validated for use at the SGS laboratory, Lakefield, ON site.

Quality Compliance: Instrument performance / calibration quality criteria were met and extraction and analysis limits for holding times were met.

nC6 and nC10 response factors within 30% of response factor for toluene: YES

nC10, nC16 and nC34 response factors within 10% of the average response for the three compounds: YES

C50 response factors within 70% of nC10 + nC16 + nC34 average: YES

Linearity is within 15%: YES

F4G - gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

The results for F4 and F4G are both reported and the greater of the two values is to be used in application to the CWS PHC.

Temperature of Sample upon Receipt: 2 degrees C

Cooling Agent Present: Yes

Custody Seal Present: Yes

Chain of Custody Number: 020371

### SIGNATORIES

Brad Moore Hon. B.Sc



TABLE OF CONTENTS

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First Page.....	1
Index.....	2
Results.....	3-6
Exceedance Summary.....	7
QC Summary.....	8-11
Legend.....	12
Annexes.....	13



# FINAL REPORT

CA15362-JAN21 R

Client: EXP Services Inc

Project: SUD-00020031-IC

Project Manager: Jeff Newman

Samplers: Jeff Newman

## PACKAGE: REG153 - BTEX (WATER)

L1 = REG153 / GROUND WATER / COARSE - TABLE 2 - All Types of Property Uses - UNDEFINED

Parameter	Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	Result	Result	Result	Result
BTEX											
Benzene	µg/L	0.5	5	7	BH1	Ground Water	22/01/2021	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	µg/L	0.5	2.4					584	175		588
Toluene	µg/L	0.5	24					36.2	5.4		28.9
Xylene (total)	µg/L	0.5	300					5700	1280		5680
m/p-xylene	µg/L	0.5						4210	1100		4200
o-xylene	µg/L	0.5						1490	179		1490

## PACKAGE: REG153 - PHCs (WATER)

L1 = REG153 / GROUND WATER / COARSE - TABLE 2 - All Types of Property Uses - UNDEFINED

Parameter	Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	Result	Result	Result	Result
PHCs											
F1 (C6-C10)	µg/L	25	750	7	BH1	Ground Water	22/01/2021	28800	8150	1750	13100
F1-BTEX (C6-C10)	µg/L	25						22500	6690	1740	6790
F2 (C10-C16)	µg/L	100	150					5060	4640	379	5840
F3 (C16-C34)	µg/L	200	500					< 200	< 200	< 200	< 200
F4 (C34-C50)	µg/L	200	500					< 200	< 200	< 200	< 200
Chromatogram returned to baseline at nC50	Yes / No	-						YES	YES	YES	YES



# FINAL REPORT

CA15362-JAN21 R

Client: EXP Services Inc

Project: SUD-00020031-IC

Project Manager: Jeff Newman

Samplers: Jeff Newman

## PACKAGE: REG153 - THMs (VOC) (WATER)

L1 = REG153 / GROUND WATER / COARSE - TABLE 2 - All Types of Property Uses - UNDEFINED

Parameter	Units	RL	L1	Sample Number	Result	Sample Name	Result	Sample Matrix	Result
THMs (VOC)									
Bromodichloromethane	µg/L	0.5	16	7	< 0.5	BH1	< 0.5	Ground Water	< 0.5
Bromoform	µg/L	0.5	25	8	< 0.5	BH2	< 0.5	Ground Water	< 0.5
Dibromochloromethane	µg/L	0.5	25	9	< 0.5	BH3	< 0.5	Ground Water	< 0.5
				10	< 0.5	BH4	< 0.5	Ground Water	< 0.5
				11	< 0.5	DUP	< 0.5	Ground Water	< 0.5

## PACKAGE: REG153 - VOC Surrogates (WATER)

L1 = REG153 / GROUND WATER / COARSE - TABLE 2 - All Types of Property Uses - UNDEFINED

Parameter	Units	RL	L1	Sample Number	Result	Sample Name	Result	Sample Matrix	Result
VOC Surrogates									
Surr 1,2-Dichloroethane-d4	Surr Rec %	-		7	98	BH1	94	Ground Water	92
Surr 2-Bromo-1-Chloropropane	Surr Rec %	-		8	93	BH2	94	Ground Water	96
Surr 4-Bromofluorobenzene	Surr Rec %	-		9	98	BH3	97	Ground Water	98
				10	92	BH4	92	Ground Water	98
				11	92	DUP	92	Ground Water	98

## PACKAGE: REG153 - VOCs (WATER)

L1 = REG153 / GROUND WATER / COARSE - TABLE 2 - All Types of Property Uses - UNDEFINED

Parameter	Units	RL	L1	Sample Number	Result	Sample Name	Result	Sample Matrix	Result
VOCs									
Acetone	µg/L	30	2700	7	< 30	BH1	< 30	Ground Water	< 30
Bromomethane	µg/L	0.5	0.89	8	< 0.5	BH2	< 0.5	Ground Water	< 0.5
Carbon tetrachloride	µg/L	0.2	0.79	9	< 0.2	BH3	< 0.2	Ground Water	< 0.2
Chlorobenzene	µg/L	0.5	30	10	< 0.5	BH4	< 0.5	Ground Water	< 0.5
				11	< 0.5	DUP	< 0.5	Ground Water	< 0.5



# FINAL REPORT

CA15362-JAN21 R

Client: EXP Services Inc  
Project: SUD-00020031-IC  
Project Manager: Jeff Newman  
Sampler: Jeff Newman

## PACKAGE: REG153 - VOCs (WATER)

L1 = REG153 / GROUND WATER / COARSE - TABLE 2 - All Types of Property Uses - UNDEFINED

Parameter	Units	RL	L1	Sample Number	7	8	9	10	11
Sample Name				Sample Matrix	BH1	BH2	BH3	BH4	DUP
Sample Date					Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
Sample Date					22/01/2021	22/01/2021	22/01/2021	22/01/2021	22/01/2021
Result					Result	Result	Result	Result	Result
VOCs (continued)									
Chloroform	µg/L	0.5	2.4		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichlorobenzene	µg/L	0.5	3		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	µg/L	0.5	59		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	µg/L	0.5	1		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	µg/L	2.0	590		< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethane	µg/L	0.5	5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	µg/L	0.5	1.6		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethylene	µg/L	0.5	1.6		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,2-Dichloroethene	µg/L	0.5	1.6		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,2-Dichloroethene	µg/L	0.5	1.6		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane	µg/L	0.5	5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	µg/L	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	µg/L	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,3-dichloropropene (total)	µg/L	0.5	0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethylene dibromide	µg/L	0.2	0.2		< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
n-Hexane	µg/L	1.0	51		85.0	39.6	72.9	< 1	101
Methyl ethyl ketone	µg/L	20	1800		< 20	< 20	< 20	< 20	< 20
Methyl Isobutyl Ketone	µg/L	20	640		< 20	< 20	< 20	< 20	< 20
Methyl-t-butyl Ether	µg/L	2.0	15		< 2	< 2	< 2	< 2	< 2
Methylene Chloride	µg/L	0.5	50		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	µg/L	0.5	5.4		3.2	< 0.5	< 0.5	< 0.5	2.7
Tetrachloroethylene (perchloroethylene)	µg/L	0.5	1.6		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1,2-Tetrachloroethane	µg/L	0.5	1.1		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5



# FINAL REPORT

CA15362-JAN21 R

Client: EXP Services Inc

Project: SUD-00020031-IC

Project Manager: Jeff Newman

Samplers: Jeff Newman

## PACKAGE: REG153 - VOCs (WATER)

L1 = REG153 / GROUND WATER / COARSE - TABLE 2 - All Types of Property Uses - UNDEFINED

Parameter	Units	RL	L1	Sample Number	7	8	9	10	11
VOCs (continued)									
1,1,2,2-Tetrachloroethane	µg/L	0.5	1	Sample Name	BH1	BH2	BH3	BH4	DUP
1,1,1-Trichloroethane	µg/L	0.5	200	Sample Matrix	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
1,1,2-Trichloroethane	µg/L	0.5	4.7	Sample Date	22/01/2021	22/01/2021	22/01/2021	22/01/2021	22/01/2021
Trichloroethylene	µg/L	0.5	1.6	Result	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	µg/L	5.0	150	Result	< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	µg/L	0.2	0.5	Result	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2



## EXCEEDANCE SUMMARY

REG153 / GROUND WATER / COARSE - TABLE 2 - All Types of Property Uses - UNDEFINED				
Parameter	Method	Units	Result	L1

### BH1

F1 (C6 to C10)	CCME Tier 1	µg/L	28800	750
F2 (C10 to C16)	CCME Tier 1	µg/L	5060	150
Ethylbenzene	EPA 5030B/8260C	µg/L	594	2.4
n-Hexane	EPA 5030B/8260C	µg/L	95.0	51
Toluene	EPA 5030B/8260C	µg/L	36.2	24
Xylene Mixture	EPA 5030B/8260C	µg/L	5700	300

### BH2

F1 (C6 to C10)	CCME Tier 1	µg/L	8150	750
F2 (C10 to C16)	CCME Tier 1	µg/L	4640	150
Ethylbenzene	EPA 5030B/8260C	µg/L	175	2.4
Xylene Mixture	EPA 5030B/8260C	µg/L	1280	300

### BH3

F1 (C6 to C10)	CCME Tier 1	µg/L	1750	750
F2 (C10 to C16)	CCME Tier 1	µg/L	379	150
n-Hexane	EPA 5030B/8260C	µg/L	72.9	51

### DUP

F1 (C6 to C10)	CCME Tier 1	µg/L	13100	750
F2 (C10 to C16)	CCME Tier 1	µg/L	5840	150
Ethylbenzene	EPA 5030B/8260C	µg/L	589	2.4
n-Hexane	EPA 5030B/8260C	µg/L	101	51
Toluene	EPA 5030B/8260C	µg/L	26.9	24
Xylene Mixture	EPA 5030B/8260C	µg/L	5690	300



# FINAL REPORT

CA15362-JAN21 R

## QC SUMMARY

### Petroleum Hydrocarbons (F1)

Method: CCME Tier 1 | Internal ref.: ME-CA-JENV/GC-LAK-AN-010

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
F1 (O6-C10)	GCM0347-JAN21	µg/L	25	<25	ND	30	105	60	140	NV	60	140

### Petroleum Hydrocarbons (F2-F4)

Method: CCME Tier 1 | Internal ref.: ME-CA-JENV/GC-LAK-AN-010

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
F2 (C10-C16)	GCM0362-JAN21	µg/L	100	<100	9	30	94	60	140	88	60	140
F3 (C16-C34)	GCM0362-JAN21	µg/L	200	<200	ND	30	94	60	140	88	60	140
F4 (C34-C50)	GCM0362-JAN21	µg/L	200	<200	ND	30	94	60	140	88	60	140



FINAL REPORT

CA15362-JAN21 R

QC SUMMARY

Volatile Organics

Method: EPA 5030B/8260C | Internal ref.: ME-CA-ENVIGC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Ethylbenzene	GCM0013-FEB21	µg/L	0.5	<0.5	ND	30	102	60	130	105	50	140
n-Hexane	GCM0013-FEB21	µg/L	1.0	<1	ND	30	106	60	130	111	50	140
m/p-xylene	GCM0013-FEB21	µg/L	0.5	<0.5	ND	30	102	60	130	105	50	140
o-xylene	GCM0013-FEB21	µg/L	0.5	<0.5	ND	30	101	60	130	106	50	140
1,1,1,2-Tetrachloroethane	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	99	60	130	100	50	140
1,1,1-Trichloroethane	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	99	60	130	101	50	140
1,1,2,2-Tetrachloroethane	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	98	60	130	96	50	140
1,1,2-Trichloroethane	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	100	60	130	100	50	140
1,1-Dichloroethane	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	102	60	130	101	50	140
1,1-Dichloroethylene	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	103	60	130	104	50	140
1,2-Dichlorobenzene	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	100	60	130	99	50	140
1,2-Dichloroethane	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	99	60	130	98	50	140
1,2-Dichloropropane	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	97	60	130	100	50	140
1,3-Dichlorobenzene	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	99	60	130	98	50	140
1,4-Dichlorobenzene	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	99	60	130	99	50	140
Acetone	GCM0375-JAN21	µg/L	30	<30	ND	30	93	60	130	90	50	140
Benzene	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	101	60	130	102	50	140
Bromodichloromethane	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	98	60	130	98	50	140
Bromoforn	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	96	60	130	96	50	140
Bromomethane	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	102	50	140	102	50	140



# FINAL REPORT

CA15362-JAN21 R

## QC SUMMARY

Volatile Organics (continued)

Method: EPA 5030B/8280C | Internal ref.: ME-CA-ENVIGC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	High	Spike Recovery (%)	Low
Carbon tetrachloride	GCM0375-JAN21	µg/L	0.2	<0.2	ND	30	97	60	130	101	50
Chlorobenzene	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	99	60	130	100	50
Chloroform	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	101	60	130	100	50
cis-1,2-Dichloroethene	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	101	60	130	101	50
cis-1,3-Dichloropropene	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	96	60	130	99	50
Dibromochloromethane	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	97	60	130	97	50
Dichlorodifluoromethane	GCM0375-JAN21	µg/L	2.0	<2	ND	30	100	50	140	109	50
Ethylbenzene	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	102	60	130	113	50
Ethylenedibromide	GCM0375-JAN21	µg/L	0.2	<0.2	ND	30	98	60	130	100	50
n-Hexane	GCM0375-JAN21	µg/L	1.0	<1	ND	30	94	60	130	103	50
m/p-xylene	GCM0375-JAN21	µg/L	0.5	<0.5	3	30	101	60	130	76	50
Methyl ethyl ketone	GCM0375-JAN21	ug/L	20	<20	ND	30	97	60	130	96	50
Methyl isobutyl Ketone	GCM0375-JAN21	µg/L	20	<20	ND	30	98	50	140	97	50
Methyl-t-butyl Ether	GCM0375-JAN21	µg/L	2.0	<2	ND	30	94	60	130	93	50
Methylene Chloride	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	100	60	130	100	50
o-xylene	GCM0375-JAN21	µg/L	0.5	<0.5	3	30	102	60	130	78	50
Styrene	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	101	60	130	102	50
Tetrachloroethylene (perchloroethylene)	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	99	60	130	101	50
Toluene	GCM0375-JAN21	µg/L	0.5	<0.5	3	30	100	60	130	101	50
trans-1,2-Dichloroethene	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	102	60	130	101	50



FINAL REPORT

CA15362-JAN21 R

QC SUMMARY

Volatile Organics (continued)

Method: EPA 5030B/8260C | Internal ref.: ME-CA-TENVIGC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
trans-1,3-Dichloropropene	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	100	60	130	99	50	140
Trichloroethylene	GCM0375-JAN21	µg/L	0.5	<0.5	ND	30	99	60	130	99	50	140
Trichlorofluoromethane	GCM0375-JAN21	µg/L	5.0	<5	ND	30	96	50	140	99	50	140
Vinyl Chloride	GCM0375-JAN21	µg/L	0.2	<0.2	ND	30	98	60	130	99	50	140

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate laboratory accuracy with sample matrix effects.

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

**Multielement Scan Qualifier:** as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

**Duplicate Qualifier:** for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

**Matrix Spike Qualifier:** for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

## LEGEND

### FOOTNOTES

**NSS** Insufficient sample for analysis.  
**RL** Reporting Limit.  
   ↑ Reporting limit raised.  
   ↓ Reporting limit lowered.  
**NA** The sample was not analysed for this analyte  
**ND** Non Detect

Samples analysed as received. Solid samples expressed on a dry weight basis. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated. This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents.

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-- End of Analytical Report --

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## FINAL REPORT

CA15363-JAN21 R

SUD-00020031-IC

Prepared for

EXP Services Inc





# FINAL REPORT

CA15363-JAN21 R

## First Page

CLIENT DETAILS		LABORATORY DETAILS	
Client	EXP Services Inc	Project Specialist	Brad Moore Hon. B.Sc
Address	885 Regent Street Sudbury, Ontario P3E 5M4, Canada	Laboratory	SGS Canada Inc.
Contact	Jeff Newman	Address	185 Concession St., Lakefield ON, K0L 2H0
Telephone	705-674-9681	Telephone	705-652-2143
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Email	jeff.newman@exp.com	Email	brad.moore@sgs.com
Project	SUD-00020031-IC	SGS Reference	CA15363-JAN21
Order Number		Received	01/27/2021
Samples	Soil (10)	Approved	02/02/2021
		Report Number	CA15363-JAN21 R
		Date Reported	02/02/2021

## COMMENTS

CCME Method Compliance: Analyses were conducted using analytical procedures that comply with the Reference Method for the CWS for Petroleum Hydrocarbons in Soil and have been validated for use at the SGS laboratory, Lakefield, ON site.

Quality Compliance: Instrument performance / calibration quality criteria were met and extraction and analysis limits for holding times were met.

nC6 and nC10 response factors within 30% of response factor for toluene: YES

nC10, nC16 and nC34 response factors within 10% of the average response for the

three compounds: YES

C50 response factors within 70% of nC10 + nC16 + nC34 average: YES

Linearity is within 15%: YES

F4G - gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

The results for F4 and F4G are both reported and the greater of the two values is to be used in application to the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

Benzo(b)fluoranthene results for comparison to the standard are reported as benzo(b+j)fluoranthene. Benzo(b)fluoranthene and benzo(j)fluoranthene co-elute and cannot be reported individually by the analytical method used.

Temperature of Sample upon Receipt: 2 degrees C

Cooling Agent Present: Yes

Custody Seal Present: Yes

Chain of Custody Number: 020372

Increased MIBK RL for 15363-10 and 13 due to interferences

## SIGNATORIES

Brad Moore Hon. B.Sc

## TABLE OF CONTENTS

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First Page.....	1
Index.....	2
Results.....	3-13
Exceedance Summary.....	14-15
QC Summary.....	16-24
Legend.....	25
Annexes.....	26



# FINAL REPORT

CA15363-JAN21 R

Client: EXP Services Inc

Project: SUD-00020031-IC

Project Manager: Jeff Newman

Samplers: Jeff Newman

## PACKAGE: REG153 - BTEX (SOIL)

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

Parameter	Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	Result	Result	Result	Result	Result	Result
BTEX													
Benzene	µg/g	0.02	0.02	9	BH1	Soil	21/01/2021	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Ethylbenzene	µg/g	0.05	0.05					10.2	< 0.05	< 0.02	< 0.05	< 0.05	< 0.05
Toluene	µg/g	0.05	0.2					0.21	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Xylene (total)	µg/g	0.05	0.05					66.2	0.07	0.72	0.14	< 0.05	< 0.05
m/p-xylene	µg/g	0.05						52.5	0.07	0.57	0.14	< 0.05	< 0.05
o-xylene	µg/g	0.05						13.7	< 0.05	0.14	< 0.05	0.05	< 0.05

## PACKAGE: REG153 - BTEX (SOIL)

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

Parameter	Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	Result
BTEX								
Benzene	µg/g	0.02	0.02	18	DUP	Soil	22/01/2021	< 0.02
Ethylbenzene	µg/g	0.05	0.05					11.4
Toluene	µg/g	0.05	0.2					0.22
Xylene (total)	µg/g	0.05	0.05					74.7
m/p-xylene	µg/g	0.05						59.1
o-xylene	µg/g	0.05						15.7



# FINAL REPORT

CA15363-JAN21 R

Client: EXP Services Inc

Project: SUD-00020031-IG

Project Manager: Jeff Newman

Sampler: Jeff Newman

## PACKAGE: REG153 - Hydrides (SOIL)

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

Parameter	Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	Result	Result	Result	Result
Hydrides											
Antimony	µg/g	0.8	1.3	9	BH1	Soil	21/01/2021	< 0.8	< 0.8	< 0.8	< 0.8
Arsenic	µg/g	0.5	18		BH2	Soil	21/01/2021	3.0	2.7	3.2	2.5
Selenium	µg/g	0.7	1.5		BH3	Soil	21/01/2021	< 0.7	< 0.7	< 0.7	< 0.7

## PACKAGE: REG153 - Metals and Inorganics

(SOIL)

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

Parameter	Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	Result	Result	Result	Result	Result	Result
Metals and Inorganics													
Moisture Content	%	-		9	BH1	Soil	21/01/2021	19.9	14.9	18.1	17.8	20.4	21.2
Barium	µg/g	0.1	220		BH1-b	Soil	21/01/2021	12	14	12	12	12	22
Beryllium	µg/g	0.02	2.5		BH2	Soil	21/01/2021	0.22	0.23	0.20	0.20	0.21	0.21
Boron	µg/g	1	36		BH3	Soil	21/01/2021	10	12	10	10	12	12
Cadmium	µg/g	0.02	1.2		BH4	Soil	21/01/2021	0.03	0.02	0.02	< 0.02	0.09	0.09
Chromium	µg/g	0.5	70		BH4-b	Soil	21/01/2021	7.3	8.6	6.8	6.8	7.8	7.8
Cobalt	µg/g	0.01	21		BH4	Soil	21/01/2021	3.2	3.4	3.0	3.0	3.0	3.0
Copper	µg/g	0.1	92		BH4-b	Soil	21/01/2021	6.9	7.5	5.9	5.9	9.1	9.1
Lead	µg/g	0.1	120		BH4	Soil	21/01/2021	26	7.6	5.0	5.0	25	25
Molybdenum	µg/g	0.1	2		BH4-b	Soil	21/01/2021	< 0.1	0.1	< 0.1	< 0.1	0.2	0.2
Nickel	µg/g	0.5	82		BH4	Soil	21/01/2021	6.4	6.7	5.8	5.8	6.7	6.7
Silver	µg/g	0.05	0.5		BH4-b	Soil	21/01/2021	< 0.05	0.06	0.05	0.05	0.19	0.19



# FINAL REPORT

CA15363-JAN21 R

Client: EXP Services Inc

Project: SUD-00020031-IC

Project Manager: Jeff Newman

Samplers: Jeff Newman

## PACKAGE: REG153 - Metals and Inorganics

(SOIL)

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

Parameter	Units	RL	L1	Result	Result	Result	Result	Result	Result
Metals and Inorganics (continued)									
Thallium	µg/g	0.02	1	0.03	0.03	0.03	0.03	0.04	
Uranium	µg/g	0.002	2.5	0.28	0.27	0.23	0.23	0.31	
Vanadium	µg/g	3	86	11	11	10	11	11	
Zinc	µg/g	0.7	290	13	13	11	24	24	
Water Soluble Boron	µg/g	0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	



# FINAL REPORT

CA15363-JAN21 R

Client: EXP Services Inc  
Project: SUD-00020031-IC  
Project Manager: Jeff Newman  
Samplers: Jeff Newman

## PACKAGE: REG153 - Metals and Inorganics (SOIL)

Sample Number 18  
Sample Name DUP  
Sample Matrix Soil  
Sample Date 22/01/2021

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Parameter Metals and Inorganics (continued)

Parameter	Units	RL	L1	Result
Molybdenum	µg/g	0.1	2	< 0.1
Nickel	µg/g	0.5	82	5.7
Silver	µg/g	0.05	0.5	0.06
Thallium	µg/g	0.02	1	0.03
Uranium	µg/g	0.002	2.5	0.24
Vanadium	µg/g	3	86	10
Zinc	µg/g	0.7	290	13
Water Soluble Boron	µg/g	0.5		< 0.5

## PACKAGE: REG153 - Other (ORP) (SOIL)

Sample Number 9  
Sample Name BH1  
Sample Matrix Soil  
Sample Date 21/01/2021

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Parameter

#### Other (ORP)

Parameter	Units	RL	L1	Result	Result	Result	Result	Result
Mercury	ug/g	0.05	0.27	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Sodium Adsorption Ratio	No unit	0.2	2.4	0.5	0.7	0.3	1.3	0.5
SAR Calcium	mg/L	0.09		29.6	23.1	17.9	20.9	28.3
SAR Magnesium	mg/L	0.02		4.3	6.1	4.3	6.1	4.1
SAR Sodium	mg/L	0.15		10.5	14.4	5.6	26.9	10.6
Conductivity	mS/cm	0.002	0.57	0.19	0.25	0.14	0.27	0.19
pH	pH Units	0.05		7.66	7.87	7.98	8.31	7.90



# FINAL REPORT

CA15363-JAN21 R

Client: EXP Services Inc

Project: SUD-00020031-IC

Project Manager: Jeff Newman

Samplers: Jeff Newman

## PACKAGE: REG153 - Other (ORP) (SOIL)

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Parameter Other (ORP) (continued)

Parameter	Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	21/01/2021	Result	21/01/2021	Result	21/01/2021	Result	21/01/2021	Result	21/01/2021	Result
Chromium VI	µg/g	0.2	0.66	9	BH1	Soil	21/01/2021	21/01/2021	Result	21/01/2021	Result	21/01/2021	Result	21/01/2021	Result	21/01/2021	Result
Free Cyanide	µg/g	0.05	0.051						< 0.2		< 0.2		< 0.2		< 0.2		< 0.2
									< 0.05		< 0.05		< 0.05		< 0.05		< 0.05

## PACKAGE: REG153 - PHCs (SOIL)

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

Parameter	Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	21/01/2021	Result	21/01/2021	Result	21/01/2021	Result	21/01/2021	Result	21/01/2021	Result
PHCs																	
F1 (C6-C10)	µg/g	10	25	9	BH1	Soil	21/01/2021	21/01/2021	Result	21/01/2021	Result	21/01/2021	Result	21/01/2021	Result	21/01/2021	Result
F1-BTEX (C6-C10)	µg/g	10							< 10		3510		28		330		< 10
F2 (C10-C16)	µg/g	10	10						< 10		2900		27		330		< 10
F3 (C16-C34)	µg/g	50	240						12		2420		15		149		< 10
F4 (C34-C50)	µg/g	50	120						< 50		81		< 50		< 50		< 50
Chromatogram returned to baseline at	Yes / No	-							< 50		< 50		< 50		< 50		< 50
nC50									YES		YES		YES		YES		YES

# FINAL REPORT

CA15363-JAN21 R

**Client:** EXP Services Inc

**Project:** SUD-00020031-IC

**Project Manager:** Jeff Newman

**Samplers:** Jeff Newman

PACKAGE: REG153 - PHCS (SOIL)

Sample Number	18
Sample Name	DUP
Sample Matrix	Soil
Sample Date	22/01/2021

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

Parameter	Units	RL	L1	Result
<b>PHCs</b>				
F1 (C6-C10)	µg/g	10	25	1020
F1-BTEX (C6-C10)	µg/g	10		934
F2 (C10-C16)	µg/g	10	10	377
F3 (C16-C34)	µg/g	50	240	< 50
F4 (C34-C50)	µg/g	50	120	< 50
Chromatogram returned to baseline at nC50	Yes / No	-		YES

## PACKAGE: REG153 - THMs (VOC) (SOIL)

Sample Number	9
Sample Name	BH1
Sample Matrix	Soil
Sample Date	21/01/2021

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

[illegible]





# FINAL REPORT

CA15363-JAN21 R

Client: EXP Services Inc

Project: SUD-00020031-IC

Project Manager: Jeff Newman

Samplers: Jeff Newman

## PACKAGE: REG153 - THMs (VOC) (SOIL)

Sample Number 18  
Sample Name DUP  
Sample Matrix Soil  
Sample Date 22/01/2021

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

Parameter	Units	RL	L1	Result
THMs (VOC)				
Bromodichloromethane	µg/g	0.05	0.05	< 0.05
Bromoform	µg/g	0.05	0.05	< 0.05
Dibromochloromethane	µg/g	0.05	0.05	< 0.05

## PACKAGE: REG153 - VOC Surrogates (SOIL)

Sample Number 9  
Sample Name BH1  
Sample Matrix Soil  
Sample Date 21/01/2021

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

Parameter	Units	RL	L1	Result	Result	Result	Result	Result	Result
VOC Surrogates									
Surr 1,2-Dichloroethane-d4	Surr Rec %	-		96	95	94	93	95	96
Surr 4-Bromofluorobenzene	Surr Rec %	-		95	94	94	91	92	94
Surr 2-Bromo-1-Chloropropane	Surr Rec %	-		122	91	97	88	91	90

## PACKAGE: REG153 - VOC Surrogates (SOIL)

Sample Number 18  
Sample Name DUP  
Sample Matrix Soil  
Sample Date 22/01/2021

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

Parameter	Units	RL	L1	Result
VOC Surrogates				
Surr 1,2-Dichloroethane-d4	Surr Rec %	-		97
Surr 4-Bromofluorobenzene	Surr Rec %	-		98
Surr 2-Bromo-1-Chloropropane	Surr Rec %	-		122



# FINAL REPORT

CA15363-JAN21 R

Client: EXP Services Inc

Project: SUD-00020031-IC

Project Manager: Jeff Newman

Samplers: Jeff Newman

## PACKAGE: REG153 - VOCs (SOIL)

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

Parameter	Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	9	10	12	13	14	15	16	17
VOCs															
Acetone	µg/g	0.5	0.5					< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Carbon tetrachloride	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chlorobenzene	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chloroform	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dichlorodifluoromethane	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloroethane	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloroethane	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1-Dichloroethylene	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
trans-1,2-Dichloroethylene	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,2-Dichloroethylene	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloropropane	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,3-dichloropropene	µg/g	0.03	0.03					< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
trans-1,3-dichloropropene	µg/g	0.03	0.03					< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
1,3-dichloropropene (total)	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethylene dibromide	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
n-Hexane	µg/g	0.05	0.05					12.0	< 0.05	1.42	0.10	3.04	< 0.05	< 0.05	< 0.05
Methyl ethyl ketone	µg/g	0.5	0.5					< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Methyl isobutyl ketone	µg/g	0.5	0.5					< 0.5	< 11	< 0.5	< 11	< 0.5	< 0.5	< 0.5	< 0.5
Methyl-t-butyl Ether	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05



# FINAL REPORT

CA15363-JAN21 R

Client: EXP Services Inc  
Project: SUD-00020031-IC  
Project Manager: Jeff Newman  
Sampler: Jeff Newman

## PACKAGE: REG153 - VOCs (SOIL)

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Partland/Industrial - UNDEFINED

Parameter	Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	9	10	12	13	14	15	16	17
VOCs (continued)															
Methylene Chloride	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Styrene	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tetrachloroethylene	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1,2-Tetrachloroethane	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2,2-Tetrachloroethane	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1-Trichloroethane	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2-Trichloroethane	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethylene	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Trichlorofluoromethane	µg/g	0.05	0.05					< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Vinyl Chloride	µg/g	0.02	0.02					< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02



# FINAL REPORT

CA15363-JAN21 R

Client: EXP Services Inc

Project: SUD-00020031-IC

Project Manager: Jeff Newman

Sampler: Jeff Newman

## PACKAGE: REG153 - VOCs (SOIL)

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

Sample Number 18  
Sample Name DUP  
Sample Matrix Soil  
Sample Date 22/01/2021

Parameter	Units	RL	L1	Result
VOCs				
Acetone	µg/g	0.5	0.5	< 0.5
Bromomethane	µg/g	0.05	0.05	< 0.05
Carbon tetrachloride	µg/g	0.05	0.05	< 0.05
Chlorobenzene	µg/g	0.05	0.05	< 0.05
Chloroform	µg/g	0.05	0.05	< 0.05
1,2-Dichlorobenzene	µg/g	0.05	0.05	< 0.05
1,3-Dichlorobenzene	µg/g	0.05	0.05	< 0.05
1,4-Dichlorobenzene	µg/g	0.05	0.05	< 0.05
Dichlorodifluoromethane	µg/g	0.05	0.05	< 0.05
1,1-Dichloroethane	µg/g	0.05	0.05	< 0.05
1,2-Dichloroethane	µg/g	0.05	0.05	< 0.05
1,1,1-Dichloroethylene	µg/g	0.05	0.05	< 0.05
trans-1,2-Dichloroethylene	µg/g	0.05	0.05	< 0.05
cis-1,2-Dichloroethylene	µg/g	0.05	0.05	< 0.05
1,2-Dichloropropane	µg/g	0.05	0.05	< 0.05
cis-1,3-dichloropropene	µg/g	0.03		< 0.03
trans-1,3-dichloropropene	µg/g	0.03		< 0.03
1,3-dichloropropene (total)	µg/g	0.05	0.05	< 0.05
Ethylenedibromide	µg/g	0.05	0.05	< 0.05
n-Hexane	µg/g	0.05	0.05	14.6
Methyl ethyl ketone	µg/g	0.5	0.5	< 0.5
Methyl isobutyl ketone	µg/g	0.5	0.5	< 0.5
Methyl-t-butyl Ether	µg/g	0.05	0.05	< 0.05



# FINAL REPORT

CA15363-JAN21 R

Client: EXP Services Inc

Project: SUD-00020031-IC

Project Manager: Jeff Newman

Sampler: Jeff Newman

## PACKAGE: REG153 - VOCs (SOIL)

Sample Number 18  
Sample Name DUP  
Sample Matrix Soil  
Sample Date 22/01/2021

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Perkland/Industrial - UNDEFINED

Parameter	Units	RL	L1	Result
VOCs (continued)				
Methylene Chloride	µg/g	0.05	0.05	< 0.05
Styrene	µg/g	0.05	0.05	< 0.05
Tetrachloroethylene	µg/g	0.05	0.05	< 0.05
1,1,1,2-Tetrachloroethane	µg/g	0.05	0.05	< 0.05
1,1,2,2-Tetrachloroethane	µg/g	0.05	0.05	< 0.05
1,1,1-Trichloroethane	µg/g	0.05	0.05	< 0.05
1,1,2-Trichloroethane	µg/g	0.05	0.05	< 0.05
Trichloroethylene	µg/g	0.05	0.05	< 0.05
Trichlorofluoromethane	µg/g	0.05	0.25	< 0.05
Vinyl Chloride	µg/g	0.02	0.02	< 0.02

## EXCEEDANCE SUMMARY

REG153 / SOIL /  
COARSE - TABLE  
1 -  
Residential/Parkland/Industrial -  
UNDEFINED

Parameter	Method	Units	Result	L1
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### BH1

F1 (C6 to C10)	CCME Tier 1	µg/g	967	25
F2 (C10 to C16)	CCME Tier 1	µg/g	462	10
Ethylbenzene	EPA 5035A/5030B/8260C	µg/g	10.2	0.05
n-Hexane	EPA 5035A/5030B/8260C	µg/g	12.0	0.05
Toluene	EPA 5035A/5030B/8260C	µg/g	0.21	0.2
Xylene Mixture	EPA 5035A/5030B/8260C	µg/g	66.2	0.05

### BH1-b

F2 (C10 to C16)	CCME Tier 1	µg/g	12	10
Methyl Isobutyl Ketone	EPA 5035A/5030B/8260C	µg/g	< 1	0.5
Xylene Mixture	EPA 5035A/5030B/8260C	µg/g	0.07	0.05

### BH2

F1 (C6 to C10)	CCME Tier 1	µg/g	3510	25
F2 (C10 to C16)	CCME Tier 1	µg/g	2420	10
Ethylbenzene	EPA 5035A/5030B/8260C	µg/g	95.6	0.05
n-Hexane	EPA 5035A/5030B/8260C	µg/g	1.42	0.05
Toluene	EPA 5035A/5030B/8260C	µg/g	4.57	0.2
Xylene Mixture	EPA 5035A/5030B/8260C	µg/g	511	0.05

### BH2-b

F1 (C6 to C10)	CCME Tier 1	µg/g	28	25
F2 (C10 to C16)	CCME Tier 1	µg/g	15	10
Ethylbenzene	EPA 5035A/5030B/8260C	µg/g	0.11	0.05
Methyl Isobutyl Ketone	EPA 5035A/5030B/8260C	µg/g	< 1	0.5
n-Hexane	EPA 5035A/5030B/8260C	µg/g	0.10	0.05
Xylene Mixture	EPA 5035A/5030B/8260C	µg/g	0.72	0.05

### BH3

F1 (C6 to C10)	CCME Tier 1	µg/g	330	25
F2 (C10 to C16)	CCME Tier 1	µg/g	149	10
n-Hexane	EPA 5035A/5030B/8260C	µg/g	3.04	0.05
Xylene Mixture	EPA 5035A/5030B/8260C	µg/g	0.14	0.05

### BH4

Xylene Mixture	EPA 5035A/5030B/8260C	µg/g	0.26	0.05
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### DUP

F1 (C6 to C10)	CCME Tier 1	µg/g	1020	25
F2 (C10 to C16)	CCME Tier 1	µg/g	377	10

## EXCEEDANCE SUMMARY

				REG153 / SOIL / COARSE - TABLE 1 - Residential/Parklan d/Industrial - UNDEFINED
Parameter	Method	Units	Result	L1

DUP (continued)

Ethylbenzene	EPA 5035A/5030B/8260C	µg/g	11.4	0.05
n-Hexane	EPA 5035A/5030B/8260C	µg/g	14.6	0.05
Toluene	EPA 5035A/5030B/8260C	µg/g	0.22	0.2
Xylene Mixture	EPA 5035A/5030B/8260C	µg/g	74.7	0.05



# FINAL REPORT

CA15363-JAN21 R

## QC SUMMARY

### Conductivity

Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-JENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
Conductivity	EWL0406-JAN21	mS/cm	0.002	<0.002	1	10	99	90	110	NA

### Cyanide by SFA

Method: SM 4500 | Internal ref.: ME-CA-JENVISFA-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
Free Cyanide	SKA5086-JAN21	µg/g	0.05	<0.05	ND	20	107	80	120	75

### Hexavalent Chromium by SFA

Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-JENVISKA-LAK-AN-012

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
Chromium VI	SKA5095-JAN21	ug/g	0.2	<0.2	ND	20	83	80	120	75





FINAL REPORT

CA15363-JAN21 R

QC SUMMARY

Mercury by CVAAS

Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-IENVISPE-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank				Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)		
								Low	High		Low	High	
Mercury	EMS0153-JAN21	ug/g	0.05	<0.05	ND	20	107	80	120	96	70	130	

Metals in aqueous samples - ICP-OES

Method: MDE 4696e01/EPA 6010 | Internal ref.: ME-CA-IENVISPE-LAK-AN-003

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank				Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)		
								Low	High		Low	High	
SAR Calcium	ESG0074-JAN21	mg/L	0.09	<0.09	3	20	101	80	120	97	70	130	
SAR Magnesium	ESG0074-JAN21	mg/L	0.02	<0.02	11	20	99	80	120	95	70	130	
SAR Sodium	ESG0074-JAN21	mg/L	0.15	<0.15	3	20	94	80	120	89	70	130	



# FINAL REPORT

CA15363-JAN21 R

## QC SUMMARY

Metals in Soil - Aqua-regia/CP-MS

Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-IENV/SPE-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Silver	EMS0153-JAN21	ug/g	0.05	<0.05	ND	20	100	70	130	102	70	130
Arsenic	EMS0153-JAN21	µg/g	0.5	<0.5	1	20	107	70	130	97	70	130
Barium	EMS0153-JAN21	ug/g	0.1	<0.1	0	20	108	70	130	95	70	130
Beryllium	EMS0153-JAN21	µg/g	0.02	<0.02	2	20	99	70	130	93	70	130
Boron	EMS0153-JAN21	µg/g	1	<1	3	20	96	70	130	90	70	130
Cadmium	EMS0153-JAN21	µg/g	0.02	<0.02	3	20	103	70	130	101	70	130
Cobalt	EMS0153-JAN21	µg/g	0.01	<0.01	1	20	104	70	130	104	70	130
Chromium	EMS0153-JAN21	µg/g	0.5	<0.5	1	20	105	70	130	99	70	130
Copper	EMS0153-JAN21	µg/g	0.1	<0.1	1	20	106	70	130	97	70	130
Molybdenum	EMS0153-JAN21	µg/g	0.1	<0.1	11	20	106	70	130	95	70	130
Nickel	EMS0153-JAN21	ug/g	0.5	<0.5	1	20	103	70	130	101	70	130
Lead	EMS0153-JAN21	ug/g	0.1	<0.1	1	20	107	70	130	100	70	130
Antimony	EMS0153-JAN21	µg/g	0.8	<0.8	ND	20	103	70	130	74	70	130
Selenium	EMS0153-JAN21	µg/g	0.7	<0.7	ND	20	104	70	130	97	70	130
Thallium	EMS0153-JAN21	µg/g	0.02	<0.02	2	20	109	70	130	99	70	130
Uranium	EMS0153-JAN21	µg/g	0.002	<0.002	5	20	107	70	130	99	70	130
Vanadium	EMS0153-JAN21	µg/g	3	<3	0	20	104	70	130	99	70	130
Zinc	EMS0153-JAN21	µg/g	0.7	<0.7	1	20	101	70	130	99	70	130



# FINAL REPORT

CA15363-JAN21 R

## QC SUMMARY

### Petroleum Hydrocarbons (F1)

Method: CCME Tier 1 | Internal ref.: ME-CA-ENV/GC-LAK-AN-010

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
F1 (C6-C10)	GCM0005-FEB21	µg/g	10	<10	ND	30	106	80	120	100	60	140
F1 (C6-C10)	GCM0380-JAN21	µg/g	10	<10	10	30	105	80	120	100	60	140

### Petroleum Hydrocarbons (F2-F4)

Method: CCME Tier 1 | Internal ref.: ME-CA-ENV/GC-LAK-AN-010

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
F2 (C10-C16)	GCM0354-JAN21	µg/g	10	<10	ND	30	106	80	120	107	60	140
F3 (C16-C34)	GCM0354-JAN21	µg/g	50	<50	ND	30	106	80	120	107	60	140
F4 (C34-C50)	GCM0354-JAN21	µg/g	50	<50	ND	30	106	80	120	107	60	140



FINAL REPORT

CA15363-JAN21 R

QC SUMMARY

pH

Method: SM 4500 | Internal ref.: ME-CA-ENVIEWL-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)
								Low	High	Low	High
pH	ARD0009-FEB21	pH Units	0.05		0	20	100	80	120		



# FINAL REPORT

CA15363-JAN21 R

## QC SUMMARY

Volatile Organics

Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-ENVIGC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Ethylbenzene	GCM0022-FEB21	µg/g	0.05	< 0.05	ND	50	100	60	130	NSS	50	140
n-Hexane	GCM0022-FEB21	µg/g	0.05	< 0.05	ND	50	90	60	130	NSS	50	140
m/p-xylene	GCM0022-FEB21	µg/g	0.05	< 0.05	ND	50	98	60	130	NSS	50	140
o-xylene	GCM0022-FEB21	µg/g	0.05	< 0.05	ND	50	101	60	130	NSS	50	140
1,1,1,2-Tetrachloroethane	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	99	60	130	102	50	140
1,1,1-Trichloroethane	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	98	60	130	97	50	140
1,1,2,2-Tetrachloroethane	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	97	60	130	99	50	140
1,1,2-Trichloroethane	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	98	60	130	94	50	140
1,1-Dichloroethane	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	97	60	130	103	50	140
1,1-Dichloroethylene	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	98	60	130	85	50	140
1,2-Dichlorobenzene	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	98	60	130	97	50	140
1,2-Dichloroethane	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	97	60	130	96	50	140
1,2-Dichloropropane	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	96	60	130	102	50	140
1,3-Dichlorobenzene	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	100	60	130	98	50	140
1,4-Dichlorobenzene	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	99	60	130	96	50	140
Acetone	GCM0379-JAN21	µg/g	0.5	< 0.5	ND	50	95	50	140	82	50	140
Benzene	GCM0379-JAN21	µg/g	0.02	< 0.02	ND	50	96	60	130	97	50	140
Bromodichloromethane	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	97	60	130	98	50	140
Bromoform	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	97	60	130	94	50	140
Bromomethane	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	88	50	140	70	50	140



# FINAL REPORT

CA15363-JAN21 R

## QC SUMMARY

Volatile Organics (continued)

Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-ENVIGC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Carbon tetrachloride	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	97	60	130	94	50	140
Chlorobenzene	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	98	60	130	103	50	140
Chloroform	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	97	60	130	98	50	140
cis-1,2-Dichloroethylene	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	98	60	130	100	50	140
cis-1,3-dichloropropene	GCM0379-JAN21	µg/g	0.03	< 0.03	ND	50	96	60	130	97	50	140
Dibromochloromethane	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	97	60	130	91	50	140
Dichlorodifluoromethane	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	64	50	140	70	50	140
Ethylbenzene	GCM0379-JAN21	µg/g	0.05	< 0.05	6	50	99	60	130	106	50	140
Ethylenedibromide	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	98	60	130	94	50	140
n-Hexane	GCM0379-JAN21	µg/g	0.05	< 0.05	6	50	95	60	130	73	50	140
Methyl ethyl ketone	GCM0379-JAN21	µg/g	0.5	< 0.5	ND	50	94	50	140	90	50	140
Methyl isobutyl ketone	GCM0379-JAN21	µg/g	0.5	< 0.5	ND	50	96	50	140	92	50	140
Methyl-t-butyl Ether	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	92	60	130	78	50	140
Methylene Chloride	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	97	60	130	85	50	140
Styrene	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	100	60	130	104	50	140
Tetrachloroethylene	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	96	60	130	91	50	140
Toluene	GCM0379-JAN21	µg/g	0.05	< 0.05	2	50	99	60	130	97	50	140
trans-1,2-Dichloroethylene	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	97	60	130	87	50	140
trans-1,3-dichloropropene	GCM0379-JAN21	µg/g	0.03	< 0.03	ND	50	100	60	130	91	50	140
Trichloroethylene	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	96	60	130	96	50	140



# FINAL REPORT

CA15363-JAN21 R

## QC SUMMARY

Volatile Organics (continued)

Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-IENVIGC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Trichlorofluoromethane	GCM0379-JAN21	µg/g	0.05	< 0.05	ND	50	89	50	140	70	50	140
Vinyl Chloride	GCM0379-JAN21	µg/g	0.02	< 0.02	ND	50	84	50	140	86	50	140

Water Soluble Boron

Method: O.Reg. 15 3/04 | Internal ref.: ME-CA-IENV1 SPE-LAK-AN-003

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Water Soluble Boron	ESG0063-JAN21	µg/g	0.5	<0.5	0	20	101	80	120	107	70	130



# FINAL REPORT

CA15363-JAN21 R

## QC SUMMARY

**Method Blank:** a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

**Duplicate:** Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

**LCS/Spike Blank:** Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

**Matrix Spike:** A sample to which a known amount of the analyte of interest has been added. Used to evaluate laboratory accuracy with sample matrix effects.

**Reference Material:** a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

**RL:** Reporting limit

**RPD:** Relative percent difference

**AC:** Acceptance criteria

**Multielement Scan Qualifier:** as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

**Duplicate Qualifier:** for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

**Matrix Spike Qualifier:** for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.



## LEGEND

### FOOTNOTES

**NSS** Insufficient sample for analysis.  
**RL** Reporting Limit.  
     ↑ Reporting limit raised.  
     ↓ Reporting limit lowered.  
**NA** The sample was not analysed for this analyte  
**ND** Non Detect

Samples analysed as received. Solid samples expressed on a dry weight basis. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated. This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents.

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-- End of Analytical Report --

of

<p> <b>Notes:</b> Submission of samples to SGS is <i>without prejudice</i> that you have been provided direction on sample collection, handling and transportation of samples. [2] Submission of samples to SGS is <i>without prejudice</i> for completion of work. Signatures may appear on the form or be obtained on line on the contract. [3] Results may be sent by email to an identified contact of the laboratory for no additional cost. For a suitable request. This document is issued by the Laboratory under its General Conditions of Service accessible at: <a href="http://www.sgs.com/terms">http://www.sgs.com/terms</a> and conditions. Printed reports are available upon request. A reference is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. </p>	<p> <b>Tests:</b> </p>	<p> <b>Yellow &amp; White Clay - SGS (mm/dry)</b> </p>
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## **FINAL REPORT**

**CA15364-JAN21 R1**

**SUD-00020031-IC**

Prepared for

**EXP Services Inc**



# FINAL REPORT

CA15364-JAN21 R1

## First Page

### CLIENT DETAILS

Client EXP Services Inc  
Address 885 Regent Street  
Sudbury, Ontario  
P3E 5M4, Canada  
Contact Jeff Newman  
Telephone 705-674-9681  
Facsimile 705-674-5583  
Email jeff.newman@exp.com  
Project SUD-00020031-IC  
Order Number  
Samples Leachate (1)

### LABORATORY DETAILS

Project Specialist Jill Campbell, B.Sc.,GISAS  
Laboratory SGS Canada Inc.  
Address 185 Concession St., Lakefield ON, K0L 2H0  
Telephone 2165  
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SGS Reference CA15364-JAN21  
Received 01/27/2021  
Approved 02/03/2021  
Report Number CA15364-JAN21 R1  
Date Reported 02/03/2021

### COMMENTS

Temperature of Sample upon Receipt: 2 degrees C  
Cooling Agent Present:Yes  
Custody Seal Present:Yes  
  
Chain of Custody Number:020372  
  
raised RL for NO2 and NO3 due to sample matrix

### SIGNATORIES

Jill Campbell, B.Sc.,GISAS



TABLE OF CONTENTS

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First Page.....	1-2
Index.....	3
Results.....	4-7
Exceedance Summary.....	8
QC Summary.....	9-13
Legend.....	14
Annexes.....	15



# FINAL REPORT

CA15364-JAN21 R1

Client: EXP Services Inc

Project: SUD-00020031-IC

Project Manager: Jeff Newman

Sampler: Jeff Newman

## PACKAGE: REG558 - Acid rock Drainage (LEACHATE)

L1 = REG558 / LEACHATE / -- SCHEDULE 4 --

Parameter	Units	RL	L1	Sample Number	Result
Acid rock Drainage				6	
Final pH	no unit	0.01			5.59

## PACKAGE: REG558 - Metals and Inorganics (LEACHATE)

L1 = REG558 / LEACHATE / -- SCHEDULE 4 --

Parameter	Units	RL	L1	Sample Number	Result
Metals and Inorganics				6	
Sample weight	g	0.001			100
Ext Fluid	#1 or #2	0.01			2
* Ext Volume	mL	0.01			2000
Nitrite (as N)	as N mg/L	0.03			< 0.3†
Nitrate (as N)	as N mg/L	0.06			< 0.6†
Nitrate + Nitrite (as N)	as N mg/L	0.06	1000		< 0.6†
Fluoride	mg/L	0.06	150		0.16
Cyanide (total)	mg/L	0.01	20		< 0.01
Arsenic	mg/L	0.0002	2.5		0.0027
Silver	mg/L	0.00005	5		< 0.00005
Barium	mg/L	0.00002	100		0.113
Boron	mg/L	0.002	500		0.070



# FINAL REPORT

CA15364-JAN21 R1

Client: EXP Services Inc  
Project: SUD-00020031-IC  
Project Manager: Jeff Newman  
Sample: Jeff Newman

## PACKAGE: REG558 - Metals and Inorganics (LEACHATE)

L1 = REG558 / LEACHATE / -- SCHEDULE 4 --

Parameter	Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	Result
Metals and Inorganics (continued)								
Cadmium	mg/L	0.00000	3	0.5	BH1	Leachate	21/01/2021	0.000290
Chromium	mg/L	0.00008	5	5				< 0.00008
Lead	mg/L	0.00001	5	5				0.0347
Selenium	mg/L	0.00004	1	1				< 0.00004
Uranium	mg/L	0.00000	2	10				0.000730

## PACKAGE: REG558 - Other (ORP) (LEACHATE)

L1 = REG558 / LEACHATE / -- SCHEDULE 4 --

Parameter	Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	Result
Other (ORP)								
Mercury	mg/L	0.00001	0.1	0.1	BH1	Leachate	21/01/2021	< 0.00001

## PACKAGE: REG558 - VOCs (LEACHATE)

L1 = REG558 / LEACHATE / -- SCHEDULE 4 --

Parameter	Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	Result
VOCs								
Methyl ethyl ketone	mg/L	0.8	200	200	BH1	Leachate	21/01/2021	< 0.8



# FINAL REPORT

CA15364-JAN21 R1

Client: EXP Services Inc

Project: SUD-00020031-IC

Project Manager: Jeff Newman

Sampler: Jeff Newman

## PACKAGE: REG558 - VOCs (LEACHATE)

L1 = REG558 / LEACHATE / -- SCHEDULE 4 --

Sample Number 6  
Sample Name BH1  
Sample Matrix Leachate  
Sample Date 21/01/2021

Parameter	Units	RL	L1	Result
VOCs (continued)				
Vinyl Chloride	mg/L	0.008	0.2	< 0.008
Dichloromethane	mg/L	0.02	5	< 0.02
Chloroform	mg/L	0.02	10	< 0.02
Trichloroethylene	mg/L	0.02	5	< 0.02
Tetrachloroethene	mg/L	0.02	3	< 0.02
Monochlorobenzene	mg/L	0.02	8	< 0.02
Carbon tetrachloride	mg/L	0.008	0.5	< 0.008
1,2-Dichlorobenzene	mg/L	0.02	20	< 0.02
1,4-Dichlorobenzene	mg/L	0.02	0.5	< 0.02
1,2-Dichloroethane	mg/L	0.02	0.5	< 0.02
1,1,1-Dichloroethylene	mg/L	0.02	1.4	< 0.02





# FINAL REPORT

CA15364-JAN21 R1

Client: EXP Services Inc

Project: SUD-00020031-IC

Project Manager: Jeff Newman

Samplers: Jeff Newman

PACKAGE: REG558 - VOCs - BTEX (LEACHATE)

Sample Number 6  
Sample Name BH1  
Sample Matrix Leachate  
Sample Date 21/01/2021

L1 = REG558 / LEACHATE / -- SCHEDULE 4 - -

Parameter	Units	RL	L1	Result
VOCs - BTEX				
Benzene	mg/L	0.02	0.5	< 0.02



## FINAL REPORT

CA15364-JAN21 R1

### EXCEEDANCE SUMMARY

---

No exceedances are present above the regulatory limit(s) indicated



# FINAL REPORT

CA15364-JAN21 R1

## QC SUMMARY

Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-IENVIC-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
Nitrate + Nitrite (as N)	DIO0366-JAN21	mg/L	0.06	<0.06	NA		NA			NA		
Nitrite (as N)	DIO0366-JAN21	mg/L	0.03	<0.03	ND	20	99	80	120	100	75	125
Nitrate (as N)	DIO0366-JAN21	mg/L	0.06	<0.06	0	20	104	80	120	87	75	125

Cyanide by SFA

Method: SM 4500 | Internal ref.: ME-CA-IENVISFA-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
Cyanide (total)	SKA0259-JAN21	mg/L	0.01	<0.01	ND	10	93	90	110	106	75	125



FINAL REPORT

CA15364-JAN21 R1

QC SUMMARY

Fluoride by Specific Ion Electrode

Method: SM 4500 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-014

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Fluoride	EWL0407-JAN21	mg/L	0.06	<0.06	0	10	104	90	110	NV	75	125

Inorganics-General

Method: EPA 7471A/SM 3112B | Internal ref.: ME-CA-IENVISPE-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Mercury	EHG0030-JAN21	mg/L	0.00001	< 0.00001	ND	20	91	80	120	110	70	130



# FINAL REPORT

CA15364-JAN21 R1

## QC SUMMARY

Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-IENVISPE-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Silver	EMS0002-FEB21	mg/L	0.00005	<0.00005	0	20	105	90	110	93	70	130
Arsenic	EMS0002-FEB21	mg/L	0.0002	<0.0002	13	20	106	90	110	103	70	130
Barium	EMS0002-FEB21	mg/L	0.00002	<0.00002	2	20	100	90	110	100	70	130
Boron	EMS0002-FEB21	mg/L	0.002	<0.002	6	20	98	90	110	102	70	130
Cadmium	EMS0002-FEB21	mg/L	0.000003	<0.000003	16	20	103	90	110	96	70	130
Chromium	EMS0002-FEB21	mg/L	0.00008	<0.00008	ND	20	106	90	110	94	70	130
Lead	EMS0002-FEB21	mg/L	0.00001	<0.00001	1	20	99	90	110	98	70	130
Selenium	EMS0002-FEB21	mg/L	0.00004	<0.00004	2	20	106	90	110	93	70	130
Uranium	EMS0002-FEB21	mg/L	0.000002	<0.000002	0	20	100	90	110	97	70	130



# FINAL REPORT

CA15364-JAN21 R1

## QC SUMMARY

Volatile Organics

Method: EPA 5030B/8260C | Internal ref.: ME-CA-IENVIGC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS(Spike) Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	High	Spike Recovery (%)	Recovery Limits (%)	High
1,1-Dichloroethylene	GCM0375-JAN21	mg/L	0.02	<0.02	ND	30	103	60	130	104	50	140
1,2-Dichlorobenzene	GCM0375-JAN21	mg/L	0.02	<0.02	ND	30	100	60	130	99	50	140
1,2-Dichloroethane	GCM0375-JAN21	mg/L	0.02	<0.02	ND	30	99	60	130	98	50	140
1,4-Dichlorobenzene	GCM0375-JAN21	mg/L	0.02	<0.02	ND	30	99	60	130	99	50	140
Benzene	GCM0375-JAN21	mg/L	0.02	<0.02	ND	30	101	60	130	102	50	140
Carbon tetrachloride	GCM0375-JAN21	mg/L	0.008	<0.008	ND	30	97	60	130	101	50	140
Chloroform	GCM0375-JAN21	mg/L	0.02	<0.02	ND	30	101	60	130	100	50	140
Dichloromethane	GCM0375-JAN21	mg/L	0.02	<0.02	ND	30	100	60	130	100	50	140
Methyl ethyl ketone	GCM0375-JAN21	mg/L	0.8	<0.8	ND	30	97	50	140	96	50	140
Monochlorobenzene	GCM0375-JAN21	mg/L	0.02	<0.02	ND	30	99	60	130	100	50	140
Tetrachloroethene	GCM0375-JAN21	mg/L	0.02	<0.02	ND	30	99	60	130	101	50	140
Trichloroethylene	GCM0375-JAN21	mg/L	0.02	<0.02	ND	30	99	60	130	99	50	140
Vinyl Chloride	GCM0375-JAN21	mg/L	0.008	<0.008	ND	30	98	50	140	99	50	140



# FINAL REPORT

CA15364-JAN21 R1

## QC SUMMARY

**Method Blank:** a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

**Duplicate:** Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

**LCS/Spike Blank:** Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

**Matrix Spike:** A sample to which a known amount of the analyte of interest has been added. Used to evaluate laboratory accuracy with sample matrix effects.

**Reference Material:** a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

**RL:** Reporting limit

**RPD:** Relative percent difference

**AC:** Acceptance criteria

**Multielement Scan Qualifier:** as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

**Duplicate Qualifier:** for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

**Matrix Spike Qualifier:** for matrix spikes; as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

## LEGEND

### FOOTNOTES

**NSS** Insufficient sample for analysis.  
**RL** Reporting Limit.  
 ↑ Reporting limit raised.  
 ↓ Reporting limit lowered.  
**NA** The sample was not analysed for this analyte  
**ND** Non Detect

Samples analysed as received. Solid samples expressed on a dry weight basis. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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## Kathy McDonald

---

**From:** Natalie Wagar <NWagar@ocwa.com>  
**Sent:** Tuesday, February 16, 2021 10:42 AM  
**To:** Kathy McDonald  
**Cc:** Jeff St. Pierre; Allyson Kirk; Sarah Beaulieu; Keith Stringer; Kevin Woestenenk  
**Subject:** 2020 Kagawong WTP Management Review (DWQMS)  
**Attachments:** 2020 Kagawong MR Minutes.pdf

Good Morning,

It is a requirement of DWQMS that a management review be held annually and that all minutes are forwarded to the owner. Attached is a copy of the 2020 minutes. During the management review, should items be brought forward that require the attention of OCWA or the owner, it should be documented clearly within the minutes. These action items can be found in the table at front of the report.

NOTE: The action item listed in the management review has been addressed.

*Natalie Wagar*

Process and Compliance Technician – PCT  
Ontario Clean Water Agency – OCWA  
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# The Corporation of the Township of Billings

## 2020 Management Review Minutes

Review Period:

Oct 1, 2019 – Jul 31, 2020



## Drinking Water Quality Management System

Meeting Date: September 29, 2020

Attendance: Keith Stringer – OCWA Operations Management, Natalie Wagar – OCWA PCT, Sarah Beaulieu – OCWA PCT

Minutes of Review Provided to: Jeff St.Pierre – Regional Manager, Allyson Kirk – Safety, Process and Compliance Manager, Natalie Wagar – QEMS Rep & PCT, Sarah Beaulieu – QEMS Rep & PCT, Keith Stringer - Sr. Operations Manager, Kevin Woestenenk – Facility Operator, Kathy McDonald – Town of Kagawong

\*\* All reference to MOE, MOECC or MECP means Ministry of the Environment, Conservation and Parks

### Facility Highlights:

- The third party offsite audit took place on March 5, 2020.
- The internal audit took place on July 7, 2020
- No MECP inspection has taken place yet
- No AWQIs or non compliances were filed with the MECP
- The maintenance program (WMS) was deemed to be adequate. No problems were found relating to equipment, call outs or general maintenance.
- Through the Management Review, 1 action item was created.

## List of Action Items Created Through the Management Review Process

Action Items Resulting from Review			
Root Location of Action Within Minutes	Action Item	Personnel Responsible	Proposed Timeline
Internal and Third Party Audits	It was decided the best way to monitor infrastructure work completed is through the use of the capital letter, maintained by management. Management will ensure PCTs have access to the updated documents on OCWA's shared drive	Sr. Operations Manager	Dec 31, 2020

## **Incidents of Regulatory Non-Compliance**

Non compliances are reported to the local MOE inspector or can be identified within an inspection report.

- No inspection has taken place yet due to the ongoing pandemic
- No non-compliances were reported to the MECP during the review period

## **Incidents of Adverse Drinking Water Tests**

The drinking water regulation identifies particular indicators of Adverse Water Quality Incidents (AWQI) which must be reported to the MOE and the MOH.

- There were no AWQIs reported during the review period.

## **Deviations from Critical Control Point (CCP) Limits**

Critical Control Points (CCP) are established through the Risk Assessment exercise and are monitored through the SCADA and Wonderware systems.

- There were 5 incidents where chlorine levels were outside CCP limits
  - There doesn't appear to be any process issues

## **Operational Performance**

Performance is evaluated by reviewing the MOE's latest inspection rating as well as the programs put in place by the Operating Authority.

- No inspection has taken place yet due to the ongoing pandemic
- Call outs were mainly due to power outages
- Raw flow rates are close to PTTW limits but pumps are throttled to ensure no exceedances

## **Raw Water Supply and Drinking Water Quality Trends**

Raw water and drinking water trends are monitored through OCWA's SCADA and Wonderware systems and numerical data is maintained within our Process Data Management (PDM) program.

- Raw flow rates are close to PTTW limits but pumps are throttled to ensure no exceedances
- There has been a slight increase in THM levels but averages are relatively the stable.
- HAA levels have reached half MAC; sampling location will need to be reviewed

## Consumer Feedback

Community complaints are reported to the Operating Authority, either directly from consumers or through the Municipal office.

- No consumer complaints were received by the Operating Authority

## Internal and Third Party Audits

Internal audits are undertaken by the Operating Authority while external audit are performed by a third party. Any opportunities for improvement (OFI) listed within the reports are either implemented as preventive actions or are discarded as not being required.

- The off-site (surveillance) external audit was completed on March 5, 2020
  - The Operational Plan will not be updated to include the OIT in the Roles and Responsibility section
  - The operational plan was rewritten to specify raw water characteristics will be updated every 3 years.
  - The Critical Shortage of Staff contingency was tested as an actual event, using the pandemic as the incident.
- The internal audit was completed on July 7, 2020.
  - A total of 1 NC and 0 OFIs were found by the auditor.
  - It was decided the best way to monitor infrastructure work completed is through the use of the capital letter, maintained by management. Management will ensure PCTs have access to the updated documents on OCWA's shared drive (**Action Item**)

## Consideration of Applicable Best Management Practices

Best management practices found on the facility's latest inspection report, published by the Ministry of the Environment or found through other means are reviewed at least every 36 months.

- No inspection took place during the review period due to the ongoing pandemic.
- No other best management practices were reviewed.

## The Risk Assessment Process

Hazardous events are identified and control measures established for each. Risk assessments are required to be verified annually and re-assessed for the system every 36 months.

- The risk assessment process was reviewed and deemed to be adequate

## **Emergency Response Testing**

OCWA maintains 6 mandatory contingency plans which cover the majority of possible emergency situations. Each contingency must be tested annually and each must be reviewed every 5 years.

- The contingency for Critical Shortage of Staff was tested throughout the 2020 year, based on the current ongoing pandemic.
- Paperwork will be completed by end of 2020

## **Action Items from Previous Management Reviews**

Action items are initiated when deficiencies are found within the Quality Management System. Previous management review records are inspected on a continual basis.

- Work on the backflow device on public taps was delayed due to the ongoing pandemic
- Training on DWQMS was delayed due to the ongoing pandemic

## **Status of Other Actions Items Identified Between Reviews**

Action items are sometimes initiated in response to other audits or incidents.

- There were no action items identified between reviews

## **Changes That Could Affect the Quality Management System**

This discussion is held to examine any changes which have occurred within the Organization, the Municipality or the Quality Management System.

- The pandemic has changed and will continue to affect how onsite audits are conducted. Additional safety measures are required when going onsite.

## **Resources Needed to Maintain the DWQMS**

Resources are defined as those things needed to implement or maintain the QMS such as physical work, financial resources and time involved by personnel.

- No additional resources are required at this time

## **Infrastructure Review**

An infrastructure review is required annually by contractual obligations and DWQMS requirements. Infrastructure is assessed and recommendations are made to maintain or optimize the facility.

- Infrastructure reviews will be tracked solely through the use of the capital letter that will be maintained by management
- Distribution work has slowed; there is a reluctance to dig

## **Operational Plan: Currency, Content, Updates**

The DWQMS requires the Operating Authority to documents QMS for the drinking water system in the form of an Operational Plan.

- No major updates have taken place

## **Staff Suggestions, Recommendation for Improvement**

Staff suggestions are made, either directly to the Manager or the Process and Compliance Technician, and are reviewed during the Management Review.

- There were no staff suggestions

## **Next Management Review Meetings**

- Scheduled for October 2021



Effective January 1, 2021, the Ministry of Transportation (MTO) is changing the way the province manages how off-road vehicles (ORVs) are allowed on-road in some municipalities.

The use of ORVs on highways is controlled under Section 191.8 of the Highway Traffic Act (HTA), Ontario Regulation 316/03 made under the HTA, and municipal by-laws passed in accordance with the legislation and regulations. Currently, ORVs that meet the requirements in Ontario Regulation 316/03 are allowed on some provincial highways and municipal highways where a municipality has passed a by-law allowing the use of such ORVs on highways under their jurisdiction.

#### WHAT'S NEW?

Effective January 1, 2021, all ORVs that meet the requirements in Ontario Regulation 316/03 for ORVs permitted on-road, will be allowed by default on municipal highways under the jurisdiction of municipalities listed in Ontario Regulation 8/03 unless the municipality has a by-law prohibiting or restricting the use of some or all such ORVs.

Municipalities that are not listed in Ontario Regulation 8/03 will continue to be subject to the existing regulatory framework and are not affected by this change. In these municipalities, ORVs will continue to be allowed only if the municipality has passed a by-law to allow permitted ORVs on municipal highways under their jurisdiction.

# Provincial Requirements

## Municipal Considerations

**Municipalities listed in Ontario Regulation 8/03 will continue to have the authority and make decisions about ORVs through by-law to:**

► Prohibit ORVs on some or all highways



► Permit only specific ORVs on road



► Prohibit ORVs at specific hours of the day



► Impose additional lower speed limits



Local municipalities listed in Ontario Regulation 8/03 that wish to prohibit ORVs; or restrict the permitted types of ORVs; or restrict the time of day or the season when permitted types of ORVs are allowed on-road; or establish lower speed limits for these vehicles; may need to pass a new by-law.

Where a local municipality affected by the change has an existing by-law providing a blanket permission for ORVs on all municipal highways, the by-law would not be in conflict with the new regulations. If an existing by-law only permits some ORVs or restricts ORVs to only some highways, the municipality may have to revoke the by-law and pass a new by-law as outlined above if the municipality wishes to continue such restrictions.

There is no change to the enforcement of laws related to the use of ORVs. Any issues with the day-to-day operations of police services and the actions of police officers related to ORVs should be raised with the local chief of police or their designated representatives. All set fines can be found on the Ontario Court of Justice website.







This document is provided primarily as a guide. For additional information please refer to the Highway Traffic Act, associated regulations and visit [Ontario.ca/ATV](http://Ontario.ca/ATV) for information and tips related to the operation of ORVs in Ontario.

## Off-road Vehicles Allowed On-road

Effective July 1, 2020, MTO made changes to add off-road motorcycles (ORM) and extreme terrain vehicles (XTV) to the existing list of ORVs permitted on-road. These two new ORV types are in addition to the currently permitted 4-wheeled ORV types.

**MUNICIPAL BY-LAWS:** Effective July 1, 2020, the two new ORV types added to the list of ORVs permitted on-road can be allowed on municipal highways in accordance with the HTA and Ontario Regulation 316/03.

ORV is a general term used to capture several different vehicles designed for off-road use, however, only certain off-road vehicles that meet the requirements in Ontario Regulation 316/03 are permitted on-road:

Provincial Requirements	All-Terrain Vehicles	<p>"A "single-rider" all-terrain vehicle (ATV) is designed to travel on four tires, having a seat designed to be straddled by the operator, handlebars for steering control and it must be designed by the manufacturer to carry a driver only and no passengers.</p>	
		<p>A two-up ATV is designed and intended for use by an operator or an operator and a passenger. It is equipped with straddle-style seating and designed to carry only one passenger.</p>	
	Side-by-Sides	<p>A recreational off-highway vehicle (ROV) has two abreast seats, typically built with a hood, and uses a steering wheel instead of a motorcycle steering handlebar.</p>	
		<p>A utility terrain vehicle (UTV) has similar characteristics to an ROV but typically also features a box bed. UTVs are generally designed for utility rather than for recreational purposes.</p>	
	New Off-Road Vehicle Types	<p>Extreme Terrain Vehicles (XTVs), commonly referred to as Argos are 6+ wheeled off-road vehicles capable of riding in multiple terrains, including through water. These vehicles sometimes come with tracks, however, tracked versions are not being permitted on road and are restricted to off-road use only.</p>	
		<p>Off-Road Motorcycles (ORMs) are 2 wheeled off-road vehicles that come in varying configurations such as, but not limited to: Recreational ORM, Trail ORMs or Competition ORM.</p>	

**Township of Billings****ACCOUNTS FOR PAYMENT from Feb 15, 2021 to Feb 25, 2021**

<b>Cheque No.</b>	<b>Cheque Date</b>	<b>Payee</b>	<b>Amount</b>
6625	Feb 18, 2021	Canada Post Corporation	1,320.97
6645	Feb 19, 2021	Canada Revenue Agency	1,914.16
6646	Feb 19, 2021	Steele's Home Hardware	69.47
6647	Feb 24, 2021	Aeolian	197.75
6648	Feb 25, 2021	BJ'S & Addison's OK Tire	129.95
6649	Feb 25, 2021	Brendan Addison Mobile Mechanical	1,556.05
6650	Feb 25, 2021	Bridal Veil Variety	169.12
6651	Feb 25, 2021	Fred Dean LLB	224.87
6652	Feb 25, 2021	Giffen Lawyers LLP	1,999.47
6653	Feb 25, 2021	Laurentian Business Product	97.51
6654	Feb 25, 2021	Manitoulin Cedar Products	1,311.93
6655	Feb 25, 2021	Manitoulin Fuels	2,260.76
6656	Feb 25, 2021	Praxair Distribution	126.67
6657	Feb 25, 2021	Public Health Sudbury & Districts	2,156.75
6658	Feb 25, 2021	Rastall Mine Supply Ltd	378.62
6659	Feb 25, 2021	S.T.O.P. Restaurant Supply	188.99
6660	Feb 25, 2021	The Manitoulin Expositor	484.07
6661	Feb 25, 2021	The Manitoulin West Recorder	377.03
6662	Feb 25, 2021	The Public Sector Digest Inc.	7,076.63
6663	Feb 25, 2021	Town of Northeastern Manitoulin & the Islands	2,499.00

**PREAUTHORIZED PAYMENTS**

DS	Feb 16, 2021	GFL Environmental	3,917.25
DS	Feb 17, 2021	Payroll	15,713.32
DS	Feb 17, 2021	Canada Life-RSP	1,479.14
DS	Feb 17, 2021	Superior Propane	294.79
DS	Feb 18, 2021	Rogers-PW Phones	271.20
DS	Feb 22, 2021	Bell Canada	567.60
DS	Feb 24, 2021	Eastlink	148.81
DS	Feb 25, 2021	Hydro One	6,663.94
DS		<b>Total</b>	<b>53,595.82</b>