



Oshawa Environmental Advisory Committee Meeting Agenda

Tuesday, April 2, 2024, 6:30 p.m.
Committee Room

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Pages

Land Acknowledgement

The City of Oshawa is situated on lands within the traditional and treaty territory of the Michi Saagiig and Chippewa Anishinaabeg and the signatories of the Williams Treaties, which include the Mississaugas of Scugog Island, Curve Lake, Hiawatha and Alderville First Nations, and the Chippewas of Georgina Island, Rama and Beausoleil First Nations. We are grateful for the Anishinaabeg who have cared for the land and waters within this territory since time immemorial.

We recognize that Oshawa is steeped in rich Indigenous history and is now present day home to many First Nations, Inuit and Métis people. We express gratitude for this diverse group of Indigenous Peoples who continue to care for the land and shape and strengthen our community.

As a municipality, we are committed to understanding the truth of our shared history, acknowledging our role in addressing the negative impacts that colonization continues to have on Indigenous Peoples, developing reciprocal relationships, and taking meaningful action toward reconciliation.

We are all Treaty people.

Additional Agenda Items

(As may be presented at the meeting)

Declarations of Pecuniary Interest

(As may be presented by Members)

Presentations

None

Delegations

**Pearl Shore, Never Collide - Glass Railings in the City of Oshawa (All Wards)
(Previously ED-24-31)**

Referrals from Council and Committees

**OEAC-24-16 - Information from Oshawa City Council concerning the Oshawa
Environmental Advisory Committee Road Salt Working Group (All Wards) (Previously
CO-24-11)** 4

At the February 26, 2024 Council meeting, the following motion was referred to the Oshawa Environmental Advisory Committee:

Recommendation

That Item CO-24-11 be referred back to the Oshawa Environmental Advisory Committee in order for the Road Salt Working Group to provide a report to Committee and Council on its respective project before presenting to the Durham Environmental Advisory Committee.

**OEAC-24-23 - Correspondence from Diana Turchin concerning the use of Glass
Railings in the City of Oshawa (All Wards) (Previously ED-24-31)** 5

At the March 4, 2024, Economic and Development Services Committee meeting, the following motion was referred to the Oshawa Environmental Advisory Committee:

Recommendation

That Correspondence ED-24-31, dated February 10, 2024, concerning the use of Glass Railings in the City of Oshawa be referred to the Oshawa Environmental Advisory Committee.

Correspondence

OEAC-24-22 - Durham Integrated Growers 7

Correspondence from Durham Integrated Growers (DIG) advising the Committee of their Annual General Meeting and Membership fee structure.

Recommendation

Motion for Direction

Reports

OEAC-24-17 - Tree Giveaway Working Group Report 8

Recommendation

That based on Report OEAC-24-17 from the Tree Giveaway Working Group that the Committee approve September 14, 2024 for the date of the tree giveaway.

OEAC-24-18 - Fall Film Night Working Group Report 9

Recommendation

That based on Report OEAC-24-18 from the Fall Film Night Working Group that the Fall Film Night Working Group recommends to the Committee that the date of October 24th, 2024 be chosen to hold the Fall Film Night event as per communication

between Branden Morris and the Regent Theatre.

OEAC-24-19 - Mind Your Plastic Working Group Report 10

Recommendation

That based on Report OEAC-24-19 from the Mind Your Plastic Working Group that the City works with Mind Your Plastic to implement a Plastic-Free Events Policy.

OEAC-24-20 - Bloor Simcoe Intensification Working Group Report 12

Recommendation

That based on Report OEAC-24-20 from the Bloor Simcoe Intensification Working Group Report that:

1. Bike lanes be installed along Bloor St to support the intensification of the area; and,
2. Conserving the old growth trees that are present at the southwest segment of the vacant lot located at the Northwest corner of

Wentworth St W and Simcoe St S.; and,
3. Part of the vacant lot be utilized to create green space and sports/exercise equipment or fields for the community; and
4. The study team considers our comments and questions during the intensification study process; and,
5. A mitigation plan be developed should de-vehicalization in the area be not as successful as projected; and,
6. The City should continue to promote applicable Community Improvement Plan financial incentives to help grow and support development.

OEAC-24-21 - Road Salt Working Group Report 14

Recommendation

That Report OEAC-24-21 from the Road Salt Working Group be received for information.

OEAC-24-24 - Staff Report INFO-24-53: Province of Ontario's 2021 Air Quality Report 15

Recommendation

That Report OEAC-24-24 being an information memorandum dated March 27, 2024 concerning staff report INFO-24-53 about the Province of Ontario's 2021 Air Quality Report be received for information.

Items Introduced by Members

Adjournment

Date: February 28, 2024

To: Emily Posteraro, Chair and Members of the Oshawa Environmental Advisory Committee

From: Pamela Aguilera, Council-Committee Coordinator

Re: Information from Oshawa City Council – February 26, 2024

At a meeting on February 26, 2024 Oshawa City Council made the following recommendation:

CO-24-11 – Road Salt Working Group Report (All Wards) (previously OEAC-24-05) (All Wards)

Recommendation

That Item CO-24-11 be referred back to the Oshawa Environmental Advisory Committee in order for the Road Salt Working Group to provide a report to Committee and Council on its respective project before presenting to the Durham Environmental Advisory Committee.

-----Original Message-----

From: < M.F.I.P.P.A. 14 (1) >
Sent: Feb 10, 2024 12:12:28 PM
To: service@oshawa.ca
Subject: Glass Railings in Oshawa

Dear Environmental Advisory Committee, Glass railings have become increasingly popular, and they represent a significant bird conservation issue.

Many municipalities are incorporating bird-safe building design into their building standards because bird-glass collisions are one of the top three reasons for bird species' decline. Actions taken by municipalities to prevent bird-glass collisions include downward facing lighting, avoiding the use of large glass façades, and the use of visual markers on glass surfaces. The City of Toronto was the first in the world to implement a bird-safe building standard. Since then, other progressive municipalities have followed suit.

Today we are asking your municipality to take action to prevent the use of glass railings that are not bird-safe. The best solution is to use materials other than glass for railings, such as metal or wood. If glass is used, visual markers should be closely spaced on the outside surface of the glass to make birds aware of its presence. Also, opaque, etched, and patterned glass are available for use.

We hope your commitment to being an environmentally sustainable community includes reducing the threat to birds by making your residents and businesses aware of bird-glass collision issues and the available solutions to prevent them. We also respectfully encourage you to implement bird-safe building standards that include bird-safe glass railings.

For an example, please refer to the City of Toronto Green Standard:

<https://www.toronto.ca/city-government/planning-development/official-plan-guidelines/toronto-green-standard/toronto-green-standard-version-4/mid-to-high-rise-residential-non-residential-version-4/ecology-biodiversity/>

<<https://www.toronto.ca/city-government/planning-development/official-plan-guidelines/toronto-green-standard/toronto-green-standard-version-4/mid-to-high-rise-residential-non-residential-version-4/ecology-biodiversity/>>

You may also want to look at the City of Markham Building Standards.

For more general information, please visit the American Bird Conservancy website, Facts about Bird-Window Collisions.

Information is also available from Environment Canada, FAQ on bird collisions with glass windows.

We are available to answer any questions and hope to hear from you soon.

Thank you for your time.

Pearl Shore

Diana Turchin

(Volunteers)

[www.nevercollide](http://www.nevercollide.com). <<http://www.nevercollide.com>>

OEAC-24-22

From: Carol Cooper <M.F.I.P.P.A. Sec. 14(1)>
Sent: Sunday, March 24, 2024 2:23 PM
To: Durham Integrated Growers <M.F.I.P.P.A. Sec. 14(1)>
Subject: AGM & Membership Dues Reminder

Happy Spring, sort of:

This is just a reminder that DIG's Annual General Meeting will be held on Thursday, March 28th, at 7 pm at the following address:

Hebron Christian Reformed Church
4240 Anderson Street, Whitby

Annual membership dues expire on April 1st, 2024. The range of DIG membership fees continues to include:

- \$5.00 to \$15.00 for individuals
- \$25.00 for organizations, including community gardens
- \$100.00 for corporations, including businesses, organizations, and municipalities

Payment made be made in cash at the AGM, or by cheque payable and mailed to:
Durham Integrated Growers
22 Coulton Court
Whitby, Ontario
L1N 7A9

or e-transfer to: memberships@durhamdigs.ca Please note that we prefer that payments not be sent through the website until our new website has been built. We will advise when that occurs.

As the scope of our work has expanded in the last few years, we rely more than ever on these memberships. Your continued support is appreciated.

Also as a reminder, all those members who have paid before the March 28 AGM will be entered into a draw for a door prize.

Looking forward to seeing you at the AGM.

Kind regards,
Carol Cooper
Treasurer

OEAC-24-17

February 29, 2024

The Oshawa Environmental Advisory Committee Tree Giveaway working group report

With a budget of \$6,000.00 we are waiting for Pineneedle Farms to give us a quote on the trees we have requested

They are ...

Sugar Maple

White Oak

White Pine

Paper Birch will be our 4th choice were on of the 3 chosen is not available.

We recommend that September 14th be approved for the date the tree giveaway.

OEAC-24-18

Fall Film Night Working Group Report

Prepared By Members: Gregory Waclawek, Joseph Young, Emily Posteraro, AJ Groen, Tim Spiers

Date: March 5, 2024

Budget Implications: None

Recommendations:

- The fall film night working group recommends that the date of October 24th, 2024 be chosen to hold the Fall Film Night event as per communication between Branden Morris and the Regent Theatre.

OEAC-24-19

Mind Your Plastic Working Group Report for O.E.A.C. Meeting March 5, 2024

Prepared by members: Emily Posteraro (Chair), Gregory Waclawek, Joseph Young

Report:

Background

Mind Your Plastic is a federal not-for-profit organization established in 2016. They initially presented a letter to the Economic and Development Services Committee (EDSC) in June 2023, proposing that the City of Oshawa adopt a plastics-free event policy. This was referred to O.E.A.C. for comment at the June 2023 O.E.A.C. meeting, and a report was submitted by a working group for the September 2023 meeting. A working group was struck up again to provide recommendations to the EDSC after Mind Your Plastic delivered an informational presentation to O.E.A.C. at the February 2024 meeting.

The proposed *Plastic-Free Events Policy* is one of three campaigns led by Mind Your Plastic. The goal of the policy is to reduce waste, introduce benefits of using reusable packaging at municipal events, and for the group to build partnerships with municipalities. As the organization stated in their correspondence with the EDSC, “events are a great opportunity to adopt reusable materials and infrastructure, as [they] typically take place in one centralized location, which allows reusables to be easily tracked and returned throughout an event.”

Within Durham Region, Mind Your Plastic has worked with the Town of Ajax to create a *Plastic Awareness and Reduction Toolkit*. The document offers information for both individuals and businesses to reduce their usage of single-use plastics (SUPs) at events and large gatherings. The Town of Ajax has *not* adopted the *Plastic-Free Events Policy*, which is what is being proposed to the City of Oshawa.

Implications for the City of Oshawa

Oshawa has a number of large public events throughout the summer where this policy could be implemented, such as the Peony Festival, Fiesta Week, Canada Day, and the Oshawa Rotary Ribfest to name a few. The City already has water bottle filling stations and water fountains at Lakeview Park for the Canada Day event. This is a good first step towards reducing waste, beginning with plastic bottles, which are a ubiquitous form of SUPs. The City could go above and beyond by introducing a *Plastic-Free Events Policy*, for example by partnering with a company that provides reusable items (like plates, cups and cutlery) for large public events (examples of this can be found on page 12 of the Town of Ajax’s *Plastic Awareness and*

Reduction Toolkit). This policy would make Oshawa stand out as a leader on sustainability within Durham Region, lessen the burden on our municipal waste system, and set an example for residents to follow in their everyday lives.

Budget implications: None

Recommendations: That the City works with Mind Your Plastic to implement a *Plastic-Free Events Policy*.

OEAC-24-20

Bloor-Simcoe Intensification Study Report

Prepared by: Gregory Waclawek, Joseph Young, AJ Groen, Tim Speirs, Emily Noel

Date: March 5, 2024

Recommendations:

- We recommend that bike lanes be installed along Bloor St to support the intensification of the area.
- We recommend conserving the old growth trees that are present at the southwest segment of the vacant lot located at the Northwest corner of Wentworth St W and Simcoe St S.
- We recommend that part of the vacant lot be utilized to create green space and sports/exercise equipment or fields for the community.
- We recommend that the study team considers our comments and questions during the intensification study process.
- We recommend a mitigation plan be developed should de-vehicalization in the area be not as successful as projected.
- The City should continue to promote applicable Community Improvement Plan financial incentives to help grow and support development.

Comments:

- Vacant Lot @Northwest corner of Wentworth St W and Simcoe St S:
 - Conserve the old growth trees that are present at the southwest segment of the vacant lot
 - Utilizing part of the vacant lot to create green space and sports/exercise equipment or fields
 - We are concerned that there will be sufficient recreational opportunities available to the residents in this area.
- Highway noise mitigation:
 - With the increase in traffic and population, are there plans on implementing strategies to mitigate that increase in sound?
- The environmental condition (i.e., potential presence or absence of subsurface contamination from potentially contaminating activities) of a lot of these properties in the study area are likely unknown. If subsurface contamination was to be identified at properties in the study area there would be delays in redevelopment and the City should promote their financial incentives to help the City to meet the objectives of the intensification program. This could help to avoid certain lands being or remaining underutilized for an extensive period of time.
- Is there a mitigation plan in the event that de-vehicleization is not as successful as projected, given existing constraints on roadways due to the current number of vehicles.

- Are sidewalks being improved?
- Are additional bus lines being implemented?
- Are additional bike lanes being implemented?
 - We can look into how other countries implement bike lanes: The Netherlands paints bike lanes right onto the road, making the road narrower and subsequently the cars slow down. This achieves safer traffic conditions and bike lane allowance.

OEAC-24-21

Road Salt Working Group Report for O.E.A.C. Meeting March 5, 2024

Prepared by members: AJ Groen (Chair), Emily Posteraro, Joseph Young, Tim Speirs

Report:

The working group has begun discussions on its vision and key goals, i.e. articulating why we are trying to reduce road salt use and where we are aiming to have an impact. Some key areas of work that were discussed were public education, networking with other local environmental/climate advisory committees, collaborating with Ontario Tech University, projects that make the business case for road salt reduction, and how the City can set standards and precedents for smarter road salt application. Pending final approval, AJ will be delivering a brief presentation on the impacts of road salt to the Durham Environmental and Climate Advisory Committee (DECAC).

Budget implications: None

Recommendations: That the Committee receive this report for information.

Economic and Development Services Department

Date: April 2, 2024

To: Oshawa Environmental Advisory Committee (O.E.A.C.)

From: Branden Morris, O.E.A.C. Policy Advisor,
Economic and Development Services Department

Item: **OEAC-24-24**
Staff Report INFO-24-53: Province of Ontario's 2021 Air Quality Report

City of Oshawa staff prepared staff report INFO-24-53 which provides an overview of the Province's Air Quality in Ontario and particularly data recorded at the Air Quality Index monitoring station at Ontario Tech University in Oshawa.

As per Section 2.0 of INFO-24-53 "A copy of INFO-24-53, dated March 20, 2024 and the 2021 Report will be provided to the Oshawa Environmental Advisory Committee for information."

Attachment 1 is Staff Report INFO-24-53.

Recommendation:

That this information memorandum dated April 2, 2024 concerning Staff Report INFO-24-53 about the Province of Ontario's 2021 Air Quality Report be received for information.

To: City Council

From: Anthony Ambra, P.Eng, Commissioner,
Economic and Development Services Department

Item Number: INFO-24-53

Date: March 20, 2024

Subject: Province of Ontario's 2021 Air Quality Report

File: 12-02-2108

1.0 Purpose

The purpose of this Report is to provide an overview of the Province's Air Quality in Ontario 2021 Report (the "2021 Report") and in particular, data recorded at the Air Quality Index (A.Q.I.) monitoring station located at the former E.P. Taylor Stables at Ontario Tech University (285 Britannia Avenue West) in Oshawa (the "Site"). The 2021 Report was released on December 19, 2023.

A copy of the 2021 Report is available at the following website:
<https://www.ontario.ca/document/air-quality-ontario-2021-report>

In 2014, staff were directed to provide Council with relevant information on the results and trends analysis by the Province from the A.Q.I. monitoring station located at the Site, as it becomes available.

2.0 Input From Other Sources

A copy of INFO-24-53, dated March 20, 2024 and the 2021 Report will be provided to the Oshawa Environmental Advisory Committee for information.

3.0 Analysis

3.1 Provincial Air Quality Monitoring

The Province, through the Ministry of the Environment, Conservation and Parks (M.E.C.P.), operates a network of A.Q.I. monitoring stations across Ontario. In 2021, the M.E.C.P. monitored ambient air quality in real time at 39 A.Q.I monitoring stations in Ontario, in collaboration with the federal National Air Pollutant Surveillance program. The M.E.C.P.'s A.Q.I. monitoring stations are sited to be representative of general population exposure and do not necessarily reflect the air quality in locations that are most influenced by local or industrial sources of air contaminants.

Staff note that in 2022, the number of A.Q.I. monitoring stations in the Province was reduced to 38 with the closure of the Ministry's Petawawa air monitoring station.

Staff note that there is only one A.Q.I. monitoring station in Durham Region, which is located on the Site. Prior to 2005, this station was located at Ritson Road Public School (300 Ritson Road South).

A.Q.I. monitoring stations generally measure common air pollutants associated with smog formation across the ambient air monitoring network. These key air pollutants can have adverse effects on human health and the environment, when detected at certain levels. These pollutants are:

- Ground level ozone;
- Fine particulate matter;
- Nitrogen dioxide;
- Carbon monoxide;
- Sulphur dioxide; and,
- Total Reduced Sulphur Compounds.

Information from the A.Q.I. monitoring stations is used by the M.E.C.P. to:

- Inform the public about Ontario's ambient air quality;
- Assess Ontario's air quality and evaluate long-term trends;
- Identify areas where criteria and standards are exceeded;
- Provide the basis for air quality policy/program development;
- Determine the impact from the United States and Canadian sources of Ontario's air quality;
- Provide scientists with air quality data to link environmental and human health effects to pollution levels; and,
- Provide smog advisories for public health protection.

The M.E.C.P.'s monitoring is continuous and can be viewed on a real time basis (hourly summaries) on the M.E.C.P.'s website. A link to the hourly air quality summaries in Ontario can be found at the following City website: <https://www.oshawa.ca/en/home-property/air-quality.aspx>

Overall, air quality in Ontario has improved over time as both ambient concentrations of common air pollutants and emissions have decreased. Generally, this improvement can be attributed to:

- Eliminating coal-fired power plants;
- Implementing Drive Clean vehicle emissions testing;

- Placing emissions caps on sulphur dioxide and nitrogen oxides;
- Developing new air standards and rules for industrial air emissions including:
 - New rules to regulate industrial sources of air pollution for petroleum and petrochemical industries;
 - New rules for regulating air contaminants for the metal finishers and foundries sectors;
 - Creating provincial air zones that will help direct government actions to maintain and improve air quality based on the unique circumstances of each area of the province; and,
 - More stringent sulphur dioxide air standards since it is a by-product of fossil fuel combustion and industrial smelting processes.

It is important to note that the 2021 Report includes references to the Canadian Ambient Air Quality Standards (C.A.A.Q.S.), which were published by the Canadian Council of Ministers of the Environment in May 2013 to replace the Canada-wide standards for ozone and fine particulate matter. The purpose of the new non-building standards is to promote continuous improvement in air quality monitoring.

With respect to Oshawa, the 2021 Report indicates that Oshawa's A.Q.I. monitoring station monitored three pollutants:

- Ozone;
- Fine particulate matter; and,
- Nitrogen dioxide.

The 2011 Air Quality Report noted that the other pollutants (i.e. sulphur dioxide, carbon monoxide and total reduced sulphur compounds) have reached background levels and are no longer required to be monitored at the Oshawa A.Q.I. monitoring station.

3.2 Ozone in Oshawa

3.2.1 Sources of Ozone

Ground-level ozone (denoted as O₃) is a colourless, odourless gas at typical ambient concentrations and is formed when nitrogen oxide and volatile organic compounds react in the presence of sunlight. The formation and transport of ozone is strongly dependent on weather conditions and emissions of chemicals that contribute to the formation of ozone (i.e. nitrogen oxide and volatile organic compounds). Ozone is a major component of smog and major sources of ozone include the transportation and industrial sectors and general solvent use.

3.2.2 Health and Environmental Effects

Ozone irritates the respiratory tract and eyes and exposure can result in chest tightness, coughing and wheezing. Children who are active outdoors during the summer, when

ozone levels are highest, are particularly at risk of adverse effects. Individuals with pre-existing respiratory disorders, such as asthma and chronic obstructive pulmonary disease, are also at risk. Ozone is also associated with increased hospital emissions and premature deaths.

3.2.3 Oshawa Trends

In 2021, Oshawa experienced a mean ozone level of 26.9 parts per billion (p.p.b.), with 100% of all daily values less than or equal to the C.A.A.Q.S. standard of 62 p.p.b. The maximum ozone level after 24 hours was 47.58 p.p.b., which is also below the criteria of 62 p.p.b. established by the C.A.A.Q.S.

Overall, the 10 year trend indicates that ozone levels have decreased 0.37% in Oshawa from 27.0 p.p.b. in 2012 to 26.9 p.p.b. in 2021. The overall annual mean ozone levels have been volatile since 2015 with some increases and decreases year-to-year as shown below:

- 27.2 p.p.b. in 2016;
- 27.9 p.p.b. in 2017;
- 25.8 p.p.b. in 2018;
- 24.4 p.p.b. in 2019;
- 26.4 p.p.b. in 2020; and,
- 26.9 p.p.b. in 2021.

3.3 Fine Particular Matter in Oshawa

3.3.1 Sources of Fine Particulate Matter

Airborne particulate is the general term used to describe a mixture of microscopic solid particles and liquid droplets suspended in the air. Particulate matter (P.M.) includes aerosols, smoke, fumes, dust, fly ash and pollen. Fine particulate matter (denoted as P.M._{2.5}) is less than 2.5 micrometers in diameter, which is approximately 30 times smaller than the average diameter of a human hair.

Fine particulate matter consists of primary and secondary P.M._{2.5}. Primary P.M._{2.5} is emitted directly into the atmosphere and major sources include residential fireplaces, wood stoves, motor vehicles, smelters, power plants, industrial facilities, agricultural burning and forest fires. Secondary P.M._{2.5} is formed indirectly in the atmosphere through a series of complex chemical reactions involving gases such as nitrogen dioxide and sulphur dioxide.

3.3.2 Health and Environmental Impacts

Fine particulate matter can have various negative health effects, especially on the respiratory and cardiovascular systems. Exposure to fine particulate matter is associated with increased hospital admissions and emergency room visits, as well as death from heart or lung diseases. Both long and short-term particle exposures have been linked to health issues. Individuals with heart or lung diseases, children and older adults are particularly sensitive to this pollutant.

In 2021, Ontario experienced the effects of several wildfire events, including one particular event that caused widespread, elevated P.M._{2.5} concentrations across the province on July 19, 2021. Smoke from active forest fires burning in eastern Manitoba and northwestern Ontario travelled over southern Ontario, causing deteriorating air quality and reduced visibility across wide regions and affecting fine particulate matter levels.

3.3.3 Oshawa Trends

In 2021, Oshawa experienced a mean fine particulate matter level of 6.2 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$), with 100% of all daily values less than or equal to the C.A.A.Q.S. standard of 27 $\mu\text{g}/\text{m}^3$. The maximum fine particulate matter level after 24 hours was 18 $\mu\text{g}/\text{m}^3$, which is below the 2020 C.A.A.Q.S. maximum 24 hours reference level standard.

Overall, the 10-year trend indicates that fine particulate matter levels have decreased 11.4% from 7.0 $\mu\text{g}/\text{m}^3$ in 2012 to 6.2 $\mu\text{g}/\text{m}^3$ in 2021. However, the overall annual mean fine particulate matter levels have increased since 2016, as shown below:

- 5.9 $\mu\text{g}/\text{m}^3$ in 2016;
- 5.9 $\mu\text{g}/\text{m}^3$ in 2017;
- 6.4 $\mu\text{g}/\text{m}^3$ in 2018;
- 6.1 $\mu\text{g}/\text{m}^3$ in 2019;
- 6.2 $\mu\text{g}/\text{m}^3$ in 2020; and,
- 6.2 $\mu\text{g}/\text{m}^3$ in 2021.

3.4 Nitrogen Dioxide in Oshawa

3.4.1 Sources of Nitrogen Dioxide

Nitrogen dioxide is a reddish-brown gas with a pungent odour, which transforms in the atmosphere to form gaseous nitric acid and nitrates. Nitrogen dioxide plays a major role in atmospheric reactions that produce ground-level ozone, as well as reactions with other gaseous contaminants (i.e. sulphur dioxide, ammonia and volatile organic compounds) leading to the formation of fine particulate matter.

The transportation sector is the main source of nitrogen dioxide in Ontario. In addition, combustion or burning of carbon-based materials (e.g. wood, gasoline, etc.) in air produces nitrogen oxides, of which nitrogen dioxide is a component.

3.4.2 Health and Environmental Impacts

Nitrogen dioxide can irritate the lungs and lower resistance to respiratory infection, especially individuals with asthma and bronchitis. Nitrogen dioxide chemically transforms into nitric acid in the atmosphere and, when deposited, contributes to the acidification of lakes and soils in Ontario. Nitric acid can also corrode metals, fade fabrics, degrade rubber and damage trees and crops.

3.4.3 Oshawa Trends

In 2021, Oshawa experienced a mean nitrogen dioxide level of 3.4 p.p.b., which is well below the C.A.A.Q.S. annual reference level of 17.0 p.p.b.

Overall, the 10 year trend indicates that nitrogen dioxide levels have decreased 39.3% from 5.6 p.p.b. in 2012 to 3.4 p.p.b. in 2021. Other than a marginal increase in 2017 and 2020, the overall annual mean of nitrogen dioxide levels has steadily decreased since 2016, as shown below:

- 6.3 p.p.b. in 2016;
- 6.4 p.p.b. in 2017;
- 3.8 p.p.b. in 2018;
- 3.5 p.p.b. in 2019;
- 3.6 p.p.b. in 2020; and,
- 3.4 p.p.b. in 2021.

4.0 2021 Air Quality Report Summary

Based on the 2021 Report, the three pollutants currently being measured in Oshawa as noted above have continued to trend downwards in terms of pollutant levels over the course of the last ten years. This is an encouraging statistic from an environmental and sustainability perspective, showing that even while Oshawa is experiencing significant growth and development in many of its sectors, the City's mean air quality continues to improve. Most importantly, in consideration of the health risks associated with these pollutants, there is a continued benefit to the overall community as local businesses, community members and the City alike, continue to do their part to ensure safe air quality levels.

5.0 Financial Implications

There are no financial implications associated with this Report.

6.0 Relationship to the Oshawa Strategic Plan

This Report advances the Environmental Responsibility goal of the Oshawa Strategic Plan.



Tom Goodeve, M.Sc.Pl., MCIP, RPP, Director,
Planning Services



Anthony Ambra, P.Eng, Commissioner,
Economic and Development Services Department