



Agenda
Windsor-Essex County Environment Committee
held on April 25,, 2019
Meeting at 5:00p.m at the Ojibway Nature Centre

1. CALL TO ORDER

MOTION TO APPROVE AN ACTING CHAIR

2. Delegations

2.1 Brief introduction and history of WECEC – Averil Parent

2.2 Presentation by Save Ojibway regarding the seasonal closure of Matchette Road.

3. DECLARATION OF CONFLICT

4. MINUTES

Adoption of the minutes of the meeting held November 29th, 2018 – ***attached.***

5. BUSINESS

5.1 Airport woodlots motion and response from the airport – ***attached***

6. COORDINATORS REPORT

No report

7. SUBCOMMITTEE REPORTS

7.1 Air

7.2 Environmentally Sensitive Lands and Issues

8. NEW BUSINESS

8.1 WECEC Budget 2019 – ***attached***

8.2 Earth Day – ***attached***

8.3 Pat on the Back Awards

8.4 Update on City of Windsor environmental initiatives

8.4.1 Degrees of Change Climate Change Adaptation Plan Update – ***attached***

8.4.2 Global Covenant of Mayors Carbon Disclosure Project Results – ***attached***

8.5 Charles Montgomery – ***attached***

8.6 WECEC priorities 2019

9. COMMUNICATIONS

9.1 The Windsor Star: Death of neglected young trees at airport triggers anger – ***attached***

9.2 The Windsor Star: Windsor sending objection to roofless storage of pet coke in Detroit – ***attached***

9.3 City of Windsor letter to the City of Detroit regarding the storage of Petroleum Coke along the Detroit River – ***attached***

9.4 A letter in response to the March 14, 2019 letter regarding the storage of Petroleum Coke along the Detroit River, refuting these allegations – ***attached***

10. DATE OF NEXT MEETING

The next meeting will be held on June 27, 2019 at the Ojibway Nature Centre.

11. ADJOURNMENT

Windsor Essex County Environment Committee Meeting held November 29, 2018

A meeting of the Windsor Essex County Environment Committee is held this day commencing at 5:30 o'clock p.m. at the Ojibway Nature Centre, there being present the following members:

Councillor Paul Borrelli, Chair
Councillor Fred Francis
Mayor Nelson Santos, Town of Kingsville
Derek Coronado
Debby Grant
Mike Nelson

Regrets received from:

Mayor Aldo DiCarlo, Town of Amherstburg
Joe Passa
Edwin Tam

Guests in attendance:

Frank Butler
Jennifer Escott
Amandeep Hans
Tom Henderson, Detroit River Canadian Clean Up, regarding ***Item 2.1***
Ian Naisbitt
Steve Tuffin

Also present are the following resource personnel:

Averil Parent, Environmental & Sustainability Coordinator
Karina Richters, Supervisor, Environmental Sustainability & Climate Change

1. Call to Order

The Chair calls the meeting to order at 6:33 o'clock p.m. and the Committee considers the Agenda being Schedule "A" attached hereto, matters which are dealt with as follows:

Moved by Councillor Francis, seconded by D. Grant,
That **APPROVAL BE GIVEN** to an expenditure in the upset amount of \$406.80 payable to eliquidMEDIA for the hosting fees for the WECEC website.
Carried.

2. Declaration of Conflict

None disclosed.

3. Minutes

Moved by Councillor Francis, seconded by D. Grant,
That the minutes of the Windsor Essex County Environment Committee of its meeting held April 5, 2018 **BE ADOPTED** as presented.
Carried.

Presentations

2.1 Tom Henderson, Detroit River Canadian Cleanup – Tree Planting on Airport Lands

Tom Henderson, Chair, Public Advisory Committee, Detroit River Canadian Cleanup provides the following comments relating to tree planting on airport lands and his resultant motion:

- Students from the David Suzuki School along with Councillors and others participated in the tree planting on airport lands in 2013.
- Prior to the tree planting, machine work was undertaken on 7.5 acres of land for the purpose of merging two of the three woodlots.
- The far eastern woodlot runs along Lauzon Road to the centre woodlot for a total of 15 acres.
- The intention was for planting trees on 7.5 acres in 2013 and to plant on the remaining 7.5 acres in the following season.

T. Henderson proposes the following wording for a motion from the Public Advisory Committee, Detroit River Canadian Cleanup to WECEC:

“Whereas the Essex Region Conservation Authority and the Detroit River Canadian Cleanup received permission by Windsor City Council decision M250-2013 dated June 17, 2013 to plant trees and shrubs on a 7.5 acre parcel of land between the middle and easternmost woodlots at a cost of \$30,000 utilizing ERCA and DRCC professional staff, elementary school students and adult volunteers; and

Whereas 83.9% of the trees and shrubs were reported as surviving as of Fall 2014 as per survival monitoring surveys completed by ERCA's Restoration Biologist and Acting Forester; and

Whereas in 2015 Airport management refused ERCA permission to enter the area to maintain the planting resulting in 90% loss, as determined by Windsor Airport

staff, due to wild grassland weeds taking over within the tree rows which were no longer being maintained

Therefore, be it resolved that Windsor Airport be required to underwrite the \$30,000 cost to replace the lost trees and to agree that ERCA be permitted to enter the property in the future as required to maintain the planted trees, shrubs and native herbaceous groundcover."

Councillor Francis states he reviewed the 2013 agreement between the Airport, the Little River Enhancement Group and ERCA. He expresses concern that the motion cannot proceed unless indemnification is provided in the agreement.

T. Henderson responds that the rationale for the indemnification request is that Trees Ontario contributed the funding for this project. Trees Ontario requested an update on the progress of the trees and they approached ERCA for this information. ERCA indicated the Airport would not allow access to the property. His proposal is to restore the funding that was lost as the project died.

M. Nelson indicates he cannot speak to the indemnification clause, however, he adds ERCA has not been able to access the property to assess the survival of the trees and to report back to some of the granting agencies. He suggests an amendment to the motion would be to "work with administration to find alternative locations for future tree plantings.

Councillor Francis provides the following comments relating to this matter:

- This issue relates to the Airport, ERCA and the City of Windsor.
- Suggestion for all three parties to meet and to discuss the matter.
- Proposes that this matter go before the Airport Board for comment and a resolution of the Board to come back to either ERCA or City Council.
- Suggestion for the Legal Department to vet this matter as there is no indemnification and, to look at the unintended consequences of other organizations who in the future may be hesitant to plant trees

Moved by Councillor Francis, seconded by D. Grant,

That Administration from YQG Windsor International Airport **BE REQUESTED** to provide a formal submission and/or for a representative to attend a future meeting of the Windsor Essex County Environment Committee to address the matter of tree planting on the airport lands

Carried.

M. Nelson and D. Coronado voting nay.

Clerk's Note: Kate Tracey, Legal Counsel has advised "the term of the consent to enter agreement expired on October 31, 2013. Accordingly, all terms and conditions contained therein are no longer in force, including the indemnity provisions".

2.2 Mike Nelson, ERCA - Wetlands

The PowerPoint Presentation entitled "Wetlands – November 29, 2018, Michael Nelson" is **attached** as Appendix "A". M. Nelson provides an overview of the presentation that includes information relating to the following topics:

- What is a wetland?
- What kind of wetlands do we have in Ontario?
- Where are the wetlands in Windsor and Essex County?
- What are some of the things that wetlands do?
- What threats are facing wetlands today?
- What actions are underway?

Moved by Councillor Francis, seconded by D. Grant,
That the PowerPoint Presentation entitled "Wetlands" provided by Mike Nelson **BE RECEIVED**.

Carried.

5. Business Items

5.1 WECEC 2018 Annual Report

Moved by Councillor Francis, seconded by D. Grant,
That the WECEC 2018 Annual Report provided by the Environment and Sustainability Coordinator **BE RECEIVED**.

Carried.

A. Parent advises the balance of the WECEC 2018 Operating Budget is \$5,258.38 and she suggests a carry forward of the funds to 2019 to be directed to the Green Speaker Series.

Moved by Councillor Francis, seconded by D. Grant,
That Administration **BE REQUESTED** to consider a carry forward of the Windsor Essex County Environment Committee's residual operating budget in the amount of \$5,258.38 to 2019 for the purpose of retaining speakers for the Green Speaker Series.

Carried.

Clerk's Note: *Items 7.1.1. to 8.21 were not discussed due to an impending loss of quorum. These items will be discussed at the next meeting of WECEC.*

7. Subcommittee Reports

7.1 Air

7.1.1 Municipal Climate Action Needs Provincial Support

7.1.2 City Climate Plan Report Card 2018

7.2 Environmentally Sensitive Lands and Issues

8. New Business

8.1 Update on City of Windsor environmental initiatives

8.1.1 Degrees of Change Climate Change Adaptation Plan

8.2 Update on Essex County environmental initiatives

8.2.1 Town of Tecumseh initiatives

9. Communications

None.

10. Date of Next Meeting

To be determined.

11. Adjournment

There being no further business, the meeting is adjourned at 6:15 o'clock p.m.

CHAIR

COMMITTEE COORDINATOR

REPORT NO. 101
of the
WINDSOR-ESSEX COUNTY ENVIRONMENT COMMITTEE (WECEC)
of its meeting held
November 29, 2018
at 5:30 o'clock p.m.
Ojibway Nature Centre

Members present at the November 29, 2018 meeting:

Councillor Paul Borrelli, Chair
Councillor Fred Francis
Nelson Santos, Mayor, Town of Kingsville
Derek Coronado
Debby Grant
Mike Nelson

Your Committee submits the following recommendation:

Moved by Councillor Francis, seconded by D. Grant,
That Administration from YQG Windsor International Airport **BE REQUESTED** to provide a formal submission and/or for a representative to attend a future next meeting of the Windsor Essex County Environment Committee to address the matter of tree planting on the airport lands
Carried.
M. Nelson and D. Coronado voting nay.

Clerk's Note: The motion provided by the Public Advisory Council, Detroit River Canadian Cleanup is ***attached.***

CHAIR

COMMITTEE COORDINATOR

NOTIFICATION	WECEC – On file
Tom Henderson, Detroit River Canadian Clean-up	henderson99@gmail.com
Hilary Payne	On file

Public Advisory Council, Detroit River Canadian Cleanup
Motion to the Windsor Essex County Environment Committee
regarding Airport Woodlands

"Whereas the Essex Region Conservation Authority and the Detroit River Canadian Cleanup received permission by Windsor City Council decision M250-2013 dated June 17, 2013 to plant trees and shrubs on a 7.5 acre parcel of land between the middle and easternmost woodlots at a cost of \$30,000 utilizing ERCA and DRCC professional staff, elementary school students and adult volunteers; and

Whereas 83.9% of the trees and shrubs were reported as surviving as of Fall 2014 as per survival monitoring surveys completed by ERCA's Restoration Biologist and Acting Forester; and

Whereas in 2015 Airport management refused ERCA permission to enter the area to maintain the planting resulting in 90% loss, as determined by Windsor Airport staff, due to wild grassland weeds taking over within the tree rows which were no longer being maintained

Therefore, be it resolved that Windsor Airport be required to underwrite the \$30,000 cost to replace the lost trees and to agree that ERCA be permitted to enter the property in the future as required to maintain the planted trees, shrubs and native herbaceous groundcover."

Submitted by:
Tom Henderson, Chair
Public Advisory Council, Detroit River Canadian Cleanup



YQG

YOUR
QUICK
GATEWAY
(WINDSOR)

Windsor International Airport
3200 County Rd. 42
Unit Number 200
Windsor, Ontario
Canada, N8V 0A1

phone: 519-969-2430
fax: 519-969-6053
web: www.YQG.ca

MEMORANDUM

To: Windsor Essex County Environment Committee

From: Steve Tuffin, Director of Operations, Windsor International Airport

Date: April 16th 2019

Subject: TREE PLANTING ON AIRPORT LANDS

Background

In the spring of 2013, the Windsor City Council granted permission to the Essex Region Conservation Authority and the Detroit River Canadian Cleanup Group, to plant trees on a parcel of land at the Windsor International Airport. The motion presented to City Council at that time did not have the approval of the Board of Directors of the Airport.

In January 2014 a similar request from the Little River Enhancement Group, (Lil Reg) was made through the Environment, Transportation and Public Safety Standing Committee. The Committees request was made to City Council to continue with the planting of trees on airport grounds. City Council approved this request on May 20, 2014. However, when the YQG Board considered the matter, the Board did not approve Lil Reg's request.

On August 25, 2014, the Standing Committee's recommendation to endorse the Phase 3 Swamp Wetland Restoration on Airport lands proceeded to City Council. At the same time, a memo was submitted by Administration (the CAO, the City Engineer, the City Solicitor and the City Planner) recommending that Council "NOTE and FILE" the Committee's report and that decision essentially terminated City Council's previous approval of May 20, 2014.

On June 30, 2015 at a meeting of the YQG Board of Directors meeting, a motion was passed to discontinue support for the planting of trees on the airport grounds.

Respectfully submitted

Steve Tuffin
Director of Operations
Your Quick Gateway (Windsor) Inc.

Carolyn Brown
CEO
Your Quick Gateway (Windsor) Inc.

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WECFC BUDGET – SUMMARY

2019 Budget				
Item	Credit	Estimated Cost	Actual Cost	Status
Budget	\$8,000.00			
Carry over from 2018	\$5,256.00			
Pat on the Back		\$2500.00		
Green Speaker #1		\$1000.00		
Green Speaker #2		\$1000.00		
Website Hosting and Domain Fee		\$450.00		
Earth Day		\$35.00		
TOTALS	\$13,256	\$4,985.00		
NON-ALLOCATED REMAINING		\$8,271.00		



30 YEARS
ANNIVERSARY
CELEBRATION

Species At Risk: Blanding's Turtle

EARTH DAY

PROTECT OUR SPECIES!

Sunday, April 28th, 2019
Malden Park / 4200 Malden Rd.
10 a.m. to 3 p.m / Rain or Shine

Healthy, vibrant ecosystems depends on plant and animal species as their foundations. When a species becomes 'at risk' or 'endangered', it is a sign that the ecosystem is slowly failing. Each species that is lost triggers the loss of another species within its ecosystem. This domino effect continues until the ecosystem is completely destroyed. Humans depend on healthy ecosystems for our survival as well.

Join us at Malden Park for our 30th Anniversary! Kids, Come Meet The Sssnakes!



- Eco Exhibits
(lots of exhibitors, with items for sale)
- Super Duper Ultra Guy
- Woodland Pond Walks
- Bring some cash, food & drinks for sale



- Cycle to Malden Park
- Local Food
- Kids Activities
- Save Our Species Activity
- Environmental Arts & Crafts
- Pop Up Playground
- Earth Day Passport



NEW IN 2019!
Sciensational Sssnakes
and the
Art Lab Splatter Tent
are joining us at
EARTH DAY!

For more info:
 Contact Averil Parent
 519-253-7111 x3290
 aparent@citywindsor.ca
 www.windsorenvironmentalmasterplan.ca



Walk Wheel Windsor encourages you take alternative transportation to Earth Day.

 EarthDayWindsorEssex

Thanks To Our Partners!





Subject: Climate Change Adaptation Final Report

Reference:

Date to Council: 4/17/2019

Author: Karina Richters

Supervisor, Environmental Sustainability & Climate Change

519-253-7111 ext 3226

krichters@citywindsor.ca

Pollution Control

Report Date: 4/1/2019

Clerk's File #: E/10822

To: Mayor and Members of City Council

Recommendation:

1. THAT City Council **RECEIVE FOR INFORMATION** this update on the redevelopment of the Corporate Climate Change Adaptation Plan and the development of the Community Climate Change Adaptation Plan; and,
2. THAT City Council **APPROVE** the redevelopment of the Corporate Climate Change Adaptation Plan outlining adaptation actions for climate change impacts with a medium-low risk score or greater as determined by the defined risk management tool provided.

Executive Summary:

N/A

Background:

In November 2010, City Council approved participation in ICLEI Canada's (Local Governments for Sustainability, formerly International Council for Local Environmental Initiatives) Canada Adaptation Initiative. This initiative resulted in City Council approving our first Climate Change Adaptation Plan on November 19, 2012 (M498-2012).

In the summer of 2017, the Federation of Canadian Municipalities (FCM) issued a call for Climate Adaptation Partner Grants under the Municipalities for Climate Innovation Program (MCIP). ICLEI Canada submitted a successful grant application to undertake the Adaptation Changemakers project and solicited applications for municipalities to participate in the project.

The purpose of the Adaptation Changemakers Project is to:

- Build capacity in the selected municipalities for integrating adaptation across the municipality and the wider community;
- Develop opportunities to collaborate with local stakeholders to carry out climate change vulnerability and risk assessments, prioritize impacts and develop a local community climate adaptation action plan; and
- Create a network of adaptive communities located within Ontario, British Columbia and Newfoundland.

On March 26, 2018 City Council approved participation in this project (CR166/2018).

Discussion:

To date, the Environment Sustainability and Climate Change Office has been working with City departments and the Community to determine current and future climate change impacts, as well as carry out vulnerability and risk assessments for those impacts. This council report aims to confirm the priority impacts in order to move forward with the development of adaptation actions.

The final goal of this project is to have a redeveloped Corporate Climate Change Adaptation Plan along with a new Community Climate Change Adaptation Plan. The intent of the Corporate Climate Change Adaptation Plan is to identify the risks posed to the Corporation as well as to the Community, and to identify adaptation actions that can be undertaken by the Corporation to reduce those risks.

The intent of the Community Climate Change Adaptation Plan is to highlight the risks to the Community and will focus on what the Community can do to reduce those risks.

The Plans will be interconnected - there will be actions that the Corporation of the City of Windsor needs to undertake to reduce the risk to the Community, and the Community must engage and develop a level of responsibility to reduce risk and not rely solely on the City. A current example of this partnership is the City's downspout disconnection program. The program was designed to reduce stormwater from entering the sewer system thus reducing the risk of basement flooding to residents. However, this program is successful only if the Community is involved and residents participate.

Development of the Corporate Climate Change Adaptation Plan

All City Departments have participated in 2 departmental meetings to date. The first meeting focused on the current status of Climate Change Adaptation planning and outlined updated climate change projections for the Windsor area (Appendix A). Staff were then invited to brainstorm current and future climate change impacts to their department based on the new climate projections. These meetings resulted in over 200 possible climate change impacts being identified.

The second meeting focused on determining a department's vulnerability to their noted impacts followed by a risk assessment if warranted.

Vulnerability Assessments

Vulnerability is a function of a departments' sensitivity to a climate change impact along with its existing capacity to adapt to the impact.

In determining a service area's sensitivity to the projected changes in climate, the following questions were considered:

- Is the department already subject to existing stress regarding this impact?
- How will the impact exacerbate that stress?
- If the impact occurs, will it affect the functionality of the department?

Based on the response to the last question, the department was given a sensitivity rating for that impact.

The next step in the vulnerability assessment was to determine the departments' adaptive capacity to respond to the noted impact. Adaptive capacity describes the ability of built, natural and human systems to accommodate changes in climate with minimum disruption or additional costs.

In measuring adaptive capacity, departments considered:

- If the impact occurs, can the department adjust to the projected impact with minimal cost and disruption?
- Are there existing plans or policies that improve adaptive capacity?

The adaptive capacity rating is directly related to the departments' projections for costs and staff intervention to adjust to the projected impact. If a department requires substantial costs and staff intervention to adjust to the impact, their adaptive capacity is low. Contrary, if a department can address the projected impact with little to no extra resources they have a higher adaptive capacity.

With both the sensitivity and adaptive capacity ratings complete, a vulnerability score is given using the matrix provided below. Departments with high sensitivity and low adaptive capacity are highly vulnerable to the climate change impact. On the other hand, those with low sensitivity and high adaptive capacity are not as vulnerable. Departmental impacts scoring a vulnerability rating of V3 or higher moved on to the risk assessment.

Figure 1: Vulnerability Matrix

		Sensitivity: Low → High				
		S1	S2	S3	S4	S5
<u>Adaptive Capacity</u> Low ↓ High	AC1	V2	V2	V4	V5	V5
	AC2	V2	V2	V3	V4	V5
	AC3	V2	V2	V3	V4	V4
	AC4	V1	V2	V2	V3	V3
	AC5	V1	V1	V2	V3	V3

Risk Assessment

Risk is the combination of an events' likelihood and the resulting consequences to the Community – risk therefore equals the probability of the projected impact occurring multiplied by the consequence of that event.

Before determining the likelihood, the impact was noted as either a one-time occurrence or something that will reoccur. Most of the impacts evaluated were likely to reoccur. Impacts that were almost certain to occur or could occur several times per year were given a score of 5 while impacts that were unlikely to occur in the next 25 years received a score of 1.

The next step was to determine a consequence rating. When this exercise was completed in 2012, the estimated consequences of climate change impacts were limited to five categories: public safety, local economy and growth, community and lifestyle, environment and sustainability as well as public administration. The risk assessment tool has since been expanded and now focuses on a triple bottom line assessment to include social, economic and environmental risk factors. Each of these risk factors was broken down into 4 categories. Social Risk Factor categories include: Public Health and Safety; Displacement; Loss of Livelihood; and Cultural Aspects. Economic Risk Factor categories include: Property Damage; Local Economy and Growth; Community Livability; and Public Administration. Environment Risk Factor categories include: Air, Water, Soil & Vegetation and Ecosystem Function. The risk assessment tool is provided in Appendix B.

For each risk factor category, departments were asked to select an appropriate consequence rating. If a given impact was likely to have catastrophic consequences, it would score a 5 for that category. If the consequences of the impact was estimated to be negligible it received a 1. The scores for each criteria were added together to get an overall consequence rating score.

As noted above the likelihood and the consequence score are multiplied together to determine the overall risk score or degree of risk. Each impact receives four risk scores: the overall risk score and 3 subcategory risk scores (social, economic and environment). The subcategory risk scores allow us to identify those impacts that may not have a high overall risk score but may pose a major risk in one of the three subcategories.

Departmental Results

As noted above, departments identified over 200 climate change impact statements. The Environmental Sustainability and Climate Change Office then grouped similar impact statements together, reducing the number of overall impacts to 37. The table below summarizes the noted impacts with their associated risk scores.

Table 2: Summary of Climate Change Impact statements with Associated Risk Scores

Potential Climate Change Impact	Social Risk Score	Economic Risk Score	Environmental Risk Score	Overall Risk
More extreme weather events increase health and safety risks to the community	High - 70	High - 70	Medium-Low - 35	Medium High - 175
An increase in extreme precipitation leading to basement flooding	Medium - 50	Very-High - 85	Environment - 35	Medium High - 170
Increasing intense storms impacting the tree canopy through stress and damage	Medium - 50	Medium 50	Medium-Low - 40	Medium - 140
An increase in extreme heat causing health issues	Medium-High - 55	Medium - 45	Medium-Low - 30	Medium - 130
An increase in extreme weather causing a diversion of corporate resources	Medium-Low - 30	Medium-High - 55	Medium-Low - 35	Medium Low -120
Increasing summer temperatures will cause a decrease in air quality	Medium-Low - 40	Medium-Low - 35	Medium - 45	Medium-Low - 120
Increasing temperatures causing an increased risk for vector borne disease and new infectious diseases	Medium - 50	Medium-Low 40	Low - 25	Medium-Low 115
Increasing winter precipitation leading to an increased risk of ice conditions	Medium - 45	Medium-Low -40	Medium-Low-30	Medium-Low - 115
An increase in water levels leading to overland flooding from the Detroit River/Little River	Medium-Low -39	Medium-48	Low-27	Medium-Low - 114
Increasing intensity of storms leading to increased damage to infrastructure, power outages, safety concerns and additional clean up costs	Medium-Low - 40	Medium - 48	Low - 24	Medium-Low - 112
An increase in extreme precipitation leading to an	Medium-Low - 30	Medium - 45	Medium-Low - 35	Medium-Low - 110

overwhelming of City infrastructure				
An increase in winter and spring temperatures leading to quicker thawing and snowmelt contributing to overland flooding	Low - 25	Medium-High 55	Medium-Low - 30	Medium-Low - 110
An increase in annual temperature causing an increase in plant pests, disease and invasive species	Low - 28	Medium-Low - 36	Medium - 44	Medium-Low - 108
An increase in rainfall and temperatures causing an increase in algae	Low - 28	Medium-Low - 36	Medium-Low - 32	Medium-Low 96
An increase in summer temperatures increasing energy demand	Medium-Low - 35	Medium-Low - 35	Low - 25	Medium-Low - 95
An increase in winter temperatures will reduce the length of time outdoor rinks can operate	Medium-Low - 35	Medium-Low - 40	Low - 20	Medium-Low - 95
An increase in extreme hot days leading to increased infrastructure wear and tear	Medium-Low - 35	Medium-Low - 40	Low - 20	Medium-Low - 95
Increasing hot days and summer drought causing increased stress on landscaping and park lands	Low - 25	Medium-Low - 35	Medium-Low - 30	Medium-Low - 90
Increasing precipitation leading to closure of recreational amenities	Low- 25	Medium-Low - 40?	Low-25	Medium-Low - 90
Increasing drought leading to an increase of dust control problems during construction	Low - 25	Medium-Low - 30	Medium-Low-30	Low - 85
A changing climate requires adaptation measures but the community may not want a change in services or service levels	Medium-Low - 30	Medium-Low - 35	Low - 20	Low - 85
An increase in extreme weather leading to premature equipment failure	Medium-Low - 30	Medium-Low - 35	Low - 20	Low - 85
Extreme heat and rain may cause increased delays in construction projects	Low - 25	Medium-Low - 35	Low - 20	Low - 80

Extreme weather leading to more frequent localized power outages	Medium-Low - 32	Low - 28	Low - 20	Low - 80
Increase in heavy rainfall events leading to increased erosion	Low - 20	Low - 28	Medium-Low - 32	Low - 80
Climate Change in general causing federal/provincial legislative changes including carbon costs and climate assessment requirements	Low - 20	Medium-Low - 40	Low - 20	Low - 80
A changing climate may drive additional requirements for new developments	Low - 25	Medium-Low - 35	Low - 20	Low - 80
Variations in Great Lakes level extremes may affect marina infrastructure	Low - 28	Medium-Low - 32	Very Low - 16	Low - 78
Increase in heavy rainfall events leading to an increase in wastewater treatment plant overflows	Low - 20	Low - 25	Medium-Low - 30	Low - 75
Low precipitation rates and summer drought may cause process disruption and odour at wastewater treatment plants	Low - 25	Low - 25	Low - 25	Low - 75
An increase in extreme weather events leading to a increase in damage claims and lawsuits	Low - 20	Medium - Low - 30	Low - 20	Low - 70
Increase in heavy rainfall events putting increased stress on biological processes at wastewater treatment plants	Low - 20	Low - 25	Low - 25	Low - 70
Increasing drought conditions increasing fire risk	Low - 21	Low - 21	Low - 27	Low - 69
An increase in annual temperatures leading to an increase in active transportation demand	Low - 24	Low - 24	Very Low - 16	Low - 64
An increase in fall temperatures causing delays to tree leaf pick up in parks	Very Low - 16	Low - 24	Very Low - 16	Low - 56

A decrease in lake levels contributing to a loss of water taking permits for irrigation	Very Low - 12	Low - 18	Very Low - 15	Very Low - 45
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Administration recommends identifying adaptation actions for impacts that scored in the medium-low category or above (risk score greater than 87). Impacts which received a low risk score (below 87) will still be taken into consideration as adaptation actions are identified as there may be co-benefits to those impacts. There will also be consideration that any adaptation actions recommended for those higher risk impacts do not negatively affect the lower risk impacts.

Summary pages are developed for each climate change impact scoring Medium-Low or higher. These pages aim to provide context around the vulnerability ratings and risk scores. Where available, supporting data is provided such as historical weather data, climate change projections, local events, other government assessments, etc. These sheets will continue to be expanded upon throughout the Plan development and beyond. The impact summary pages are provided in Appendix C for reference.

Development of the Community Climate Change Adaptation Plan

In order to inform the Community Climate Change Adaptation Plan, a Community Climate Change Adaptation Task Force was formed. This Task Force includes representatives from the University of Windsor, St. Clair College, Windsor Essex Catholic District School Board, Greater Essex County Public School Board, Windsor Regional Hospital, County of Essex, Windsor Port Authority, Walpole Island First Nations, Citizens Environment Alliance, Canada Red Cross, Union Gas, Essex County Field Naturalists and Windsor Essex Community Housing. In addition, representatives from the Windsor Essex County Health Unit (WECHU) and Essex Region Conservation Authority (ERCA) also attend the Community Task Force meetings. These agencies have also been included in departmental meetings to better inform the Corporate Adaptation Plan. This Task Force is a dynamic working group and we continue to invite others as needed to fill identified representation gaps.

The Community Task Force used the same tools and matrices for determining vulnerability and risk as explained above for the development of the Corporate Climate Adaptation Plan. The following table outlines potential climate change impacts to the City of Windsor as identified by the Community.

Potential Climate Change Impact	Social Risk Score	Economic Risk Score	Environmental Risk Score	Overall Risk
Increasing risk of public health and safety risks due to lack of public knowledge about climate change.	High - 65	High - 75	Very-High - 85	High - 225
Warmer temperatures and changes in precipitation patterns can cause hot and dry conditions, leading to more heat and	Medium-High - 55	Very High - 80	Very-High - 80	High - 215

water stress on crops and livestock.				
Increase in temperatures may lead to increase in tree pests/viruses and loss of urban tree canopy.	Medium - 50	High - 65	Very-High - 80	High - 195
Increase in winter/spring temperatures can lead to earlier thawing and snowmelt, contributing to overland flooding.	Medium - 50	High - 70	High - 65	Medium-High - 185
Increased summer temperatures and hot days can cause increased demand on grid for cooling.	Medium-High - 55	Medium-Low - 40	Very High - 85	Medium-High - 180
Changes in weather patterns and extremes can cause damage to Windsor's natural features (terrestrial and aquatic) leading to decreased summer tourism and a shift in the tourism industry.	Low - 20	High - 70	Very High - 85	Medium - High - 175
Increased summer temperatures and hot days leading to heat related illnesses, particularly vulnerable populations and outdoor workers.	Medium-High - 60	Medium-High - 55	Medium-High - 60	Medium - High - 175
Increase in extreme hot days leading to buckling of roads leading to failure.	Medium - 44	Medium-High - 60	High - 68	Medium - High - 172
Increase in annual temperatures can support longer pest lifecycles, and contribute to spread of diseases and pests affecting natural systems.	High - 70	Medium - 50	Medium - 50	Medium - High - 170
Increasing summer temperatures contributing to increase air quality health advisories.	Medium-High - 60	Medium - 50	Medium-High - 55	Medium - High - 165
Increasing damage to nature trails, parks, and green spaces due to high winds and other extreme weather events will lead to temporary or permanent closures of outdoor public spaces.	Medium-High - 55	Medium - 50	Medium-High - 55	Medium - High - 160
Increased frequency of extreme weather events can lead to more power outages.	Medium - 45	Very High - 85	Medium-Low - 30	Medium - High - 160
Warmer temperatures will allow for increased growth of algae and other water plants affecting surface water quality.	Medium-High - 55	Medium - 50	Medium-High - 55	Medium - High - 160
Increased temperatures and precipitation causing damage to trees and natural features, leading to loss of ecosystem	Medium-Low - 40	Medium - 48	Medium - High	Medium - 152

goods and services.				
Increasing annual temperatures can increase the risk for vector borne diseases and food borne diseases.	Medium - 50	Medium - 50	Medium - 50	Medium - 150
Increased frequency of precipitation causing flooding and resulting in financial strain due to personal property loss and high replacement costs.	Medium-Low - 40	Medium-High - 56	Medium - 48	Medium - 144
Overland flooding can cause closure of businesses, schools, and disruptions to community services.	Medium-Low - 40	Medium-High - 56	Medium - 48	Medium - 144
Increased frequency of extreme weather events leading to basement flooding and without proper restoration allowing mold growth.	Medium - 44	Medium-High - 56	Medium-Low - 40	Medium - 140
Increasing spring and fall temperatures causing hot schools, leading to heat related illnesses in children and staff, and inhospitable conditions.	Medium - 50	Medium-Low - 40	Medium - 45	Medium - 135
Shifting temperature patterns and ecoregions can lead to inhospitable habitat for sensitive plant and animal species, changing the community's biodiversity.	Medium-Low - 40	Medium - 45	Medium - 50	Medium - 135
Increased frequency of extreme weather events causing strain on emergency response and community service providers.	Medium - 45	Medium - 50	Low - 20	Medium-Low - 115
Extreme precipitation and flooding can block access to key roadways and infrastructure throughout community, leading to isolation of residents and/or challenges for emergency services to respond.	Medium-Low - 40	Medium-Low - 36	Very Low - 16	Medium-Low - 92
Health risks and discomfort caused by increasing heat and precipitation could lead to decreased use of public transit/bus stops.	Medium-Low - 30	Medium-Low - 30	Low - 25	Low - 85
Increasing summer temperatures and poor air quality will decrease opportunities for active transportation and outdoor recreation.	Low - 35	Low - 20	Low - 25	Low - 80
Continued risk of basement flooding, causing anxiety and fear as community anticipates flooding	Low - 35	Low - 25	Low - 20	Low - 80

The Community Task Force will continue to meet to identify adaptation actions to address these risks at a community level.

Next Steps

The next step in this process will be to identify appropriate adaptation actions to reduce the risks of the identified Climate Change impacts.

Climate change projections will be shared with the broader community through a series of pop-up engagement events to increase the local understanding of how a changing climate will impact Windsor. These events will also provide City staff with an opportunity to hear how the current climate may already be impacting residents. Through these discussions additional impacts may be identified.

To fulfill the requirements of the Changemakers project, the plans must be developed by December 2019. It is the intent of Administration to table for public comment the Corporate and Community Adaptation Plans in the fall of 2019.

Risk Analysis:

This report highlights the climate change risks to the Corporation as well as to the Community as identified by City staff and the Community Task Force. The redevelopment of the Corporate Climate Change Adaptation Plan and the development of a new Community Climate Change Adaptation Plan aims to reduce the risks of climate change to both the Corporation of the City of Windsor and the Community.

The Changemakers Project timeline for completion is set for December 2019. Currently the project schedule is on schedule and no delays are expected.

Financial Matters:

ICLEI Canada has secured a grant from FCM's MCIP to support participating municipalities through to the completion of both the Corporate and Community Plan with the exception of costs associated with the Community Task Force meetings (i.e. meeting room rentals, advertising, other businesses expenses, etc.) estimated at \$500 for 2019. These expenses can be accommodated within the 2019 Environmental Master Plan Operating Budget.

Consultations:

All City Departments

Essex Region Conservation Authority

Windsor-Essex County Health Unit

Community Adaptation Task Force - University of Windsor, St. Clair College, Windsor Essex Catholic District School Board, Greater Essex County Public School Board, Windsor Regional Hospital, County of Essex, Windsor Port Authority, Walpole Island First Nations, Citizens Environment Alliance, Canada Red Cross, Union Gas, Essex County Field Naturalists and Windsor Essex Community Housing.

Conclusion:

The 2012 Climate Change Adaptation Plan outlines measures for continual improvement and strategies to ensure that the City of Windsor continues to be a leader on climate change adaptation including:

- Use best available science to analyze how the climate is changing locally and how this may impact the community;
- Routinely review the City of Windsor’s vulnerability to climate change;
- Continuously conduct risk assessments to identify priority impacts requiring adaptation actions; and
- Engage the public, business and other stakeholder groups.

The redevelopment of the climate change adaptation plan along with the partnership with ICLEI Canada has provided an opportunity to revisit the local climate science and review our vulnerability and risks to a changing climate.

This project has also allowed further engagement with the Community around climate change risks. Understanding potential climate change risks from the perspective of City staff as well as the Community will help inform the identification of adaptation actions and priorities as we continue to move forward with climate change adaptation planning

Planning Act Matters:

N/A

Approvals:

Name	Title
Paul Drca	Manager, Environmental Quality
Michael Dennis	Financial Planning Administrator
Mark Winterton	City Engineer
Joe Mancina	Chief Financial Officer & City Treasurer
Onorio Colucci	Chief Administrative Officer

Notifications:

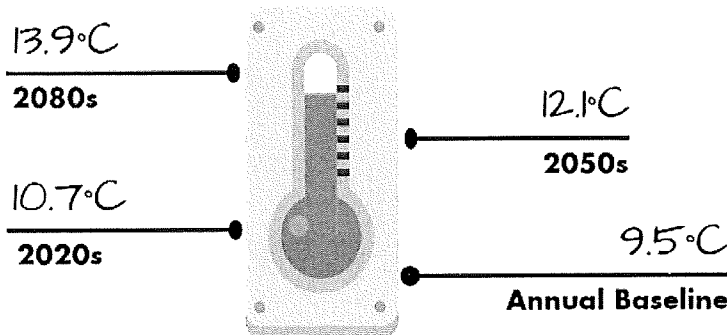
Name	Address	Email

Appendices:

- 1 Appendix A Climate infographic Windsor
- 2 Appendix B Expanded Risk Assessment
- 3 Summary Pages

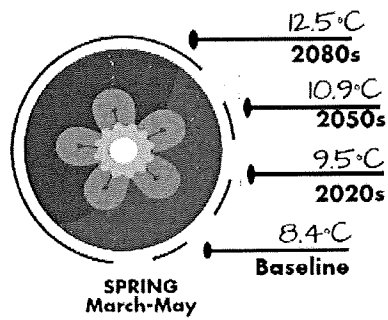
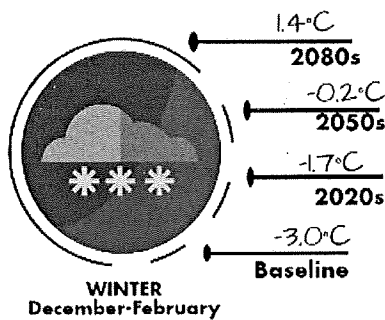
Future Climatic Projections

For: The City of Windsor | Created: June, 2018

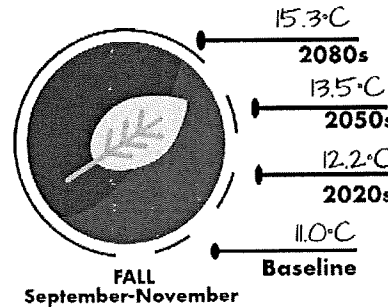
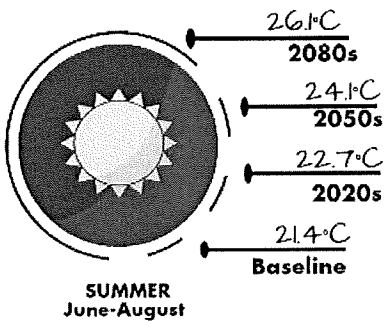


ANNUAL MEAN TEMPERATURES

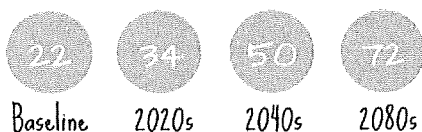
Mean, minimum & maximum daily temperatures are projected to significantly increase in every season.



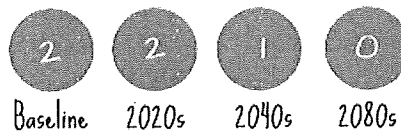
SEASONAL MEAN TEMPERATURES



DAYS ABOVE 30°C



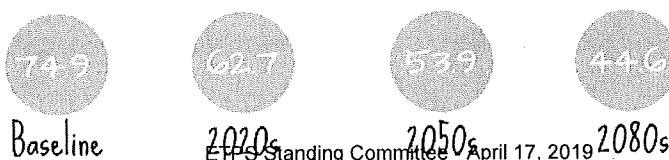
DAYS BELOW -10°C



TEMPERATURE EXTREMES

More hot days, fewer cold days.

DAYS WITH FREEZE-THAW CYCLES

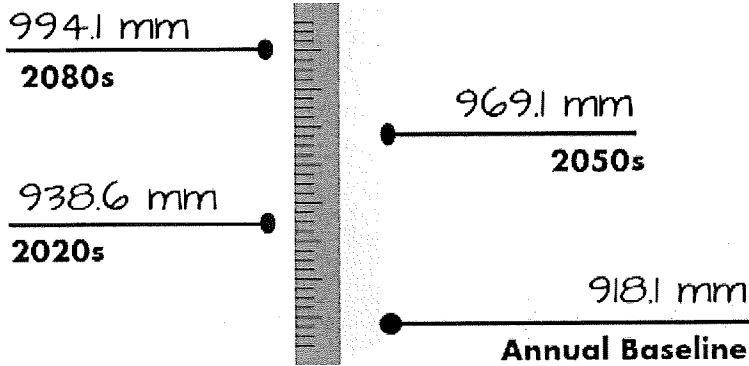


FREEZE-THAW CYCLES

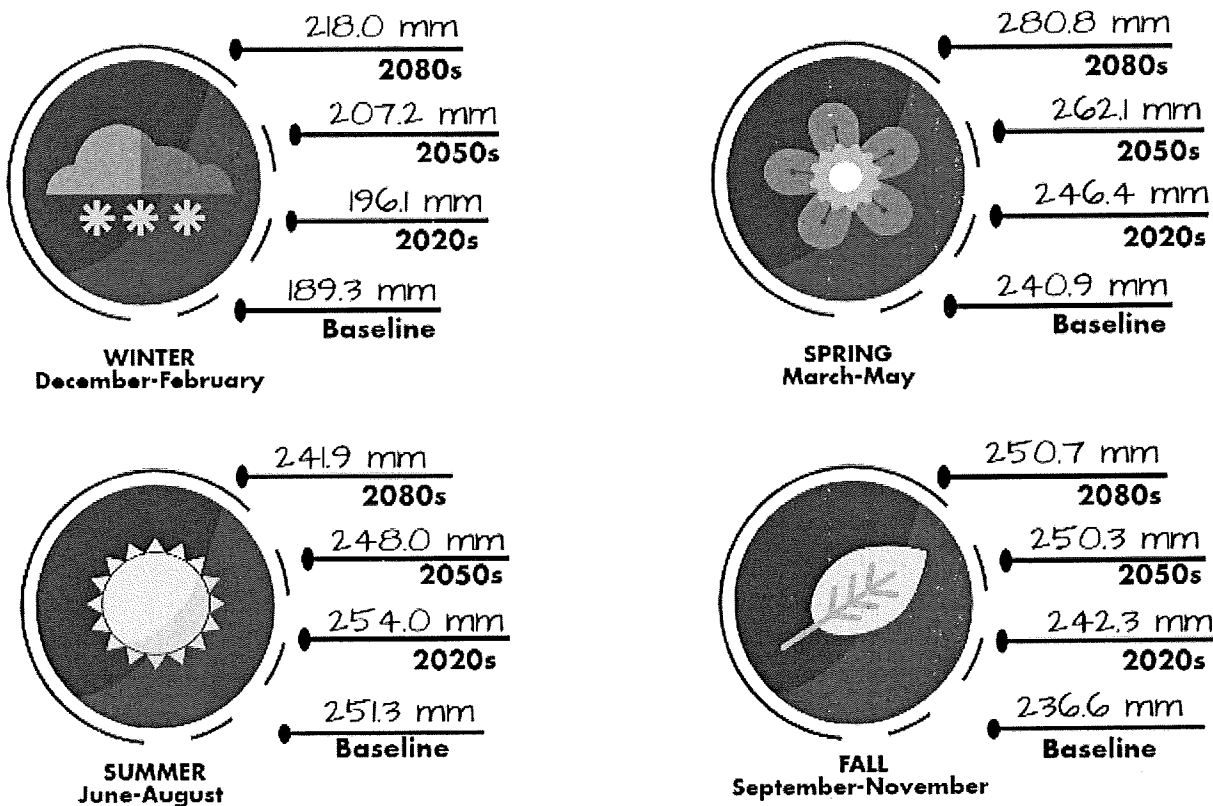
A decrease in freeze-thaw days is expected.

ANNUAL MEAN PRECIPITATION

Annual precipitation is expected to increase. Winter and Spring are projected to get significantly wetter, with a slight decline in the Summer.



SEASONAL MEAN PRECIPITATION



PRECIPITATION EVENTS

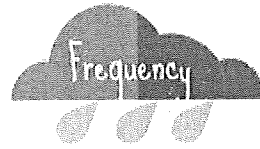
Precipitation events in general are projected to become more intense and extreme.



Intensity
Precipitation will fall at a faster rate (mm/h)

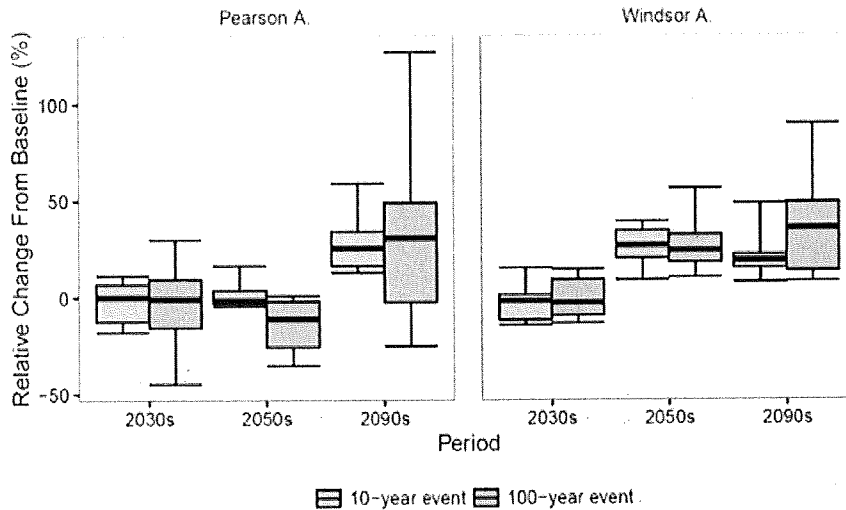


Duration
Shorter storms will have an increasingly high intensity



Frequency
Return periods of heavy storms will shorten, meaning increased frequency

COMPARING FUTURE IDF CURVES FOR SOUTHERN ONTARIO



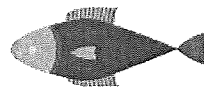
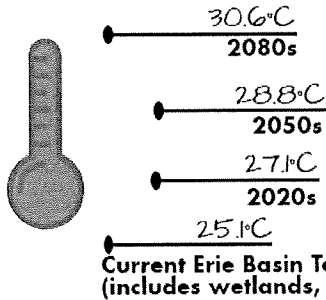
25% increase*

10-year storms

40% increase*

100-year storms

*Storm intensity may increase in by the above percentages (50th percentile, 10%-90% range)



33%

Loss of coldwater (<19°C) stream habitat

WATER TEMPERATURES

Erie basin temperatures will increase. This can negatively impact wetlands, habitats, and biodiversity.

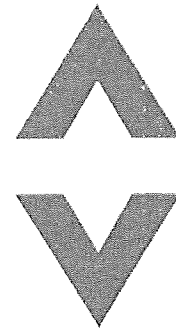
WATER LEVELS

Water levels in Lake Erie and Lake St. Clair were at record lows until 2013, but have since been increasing to above-average levels. This is caused by increased precipitation and decreased evaporation and is expected to continue through 2018.

In the long term, projections of warmer temperatures translate into expectations of lower water levels in the Great Lakes system



Loss of wetland water budget and abundance of wetland vegetation, birds, and fish communities



Sources:

Bush, E.J., Loder, J.W., James, T.S., Mortsch, L.D. and Cohen, S.J. (2014): An Overview of Canada's Changing Climate; in Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation, (ed.) F.J. Warren and D.S. Lemmen; Government of Canada, Ottawa, ON, p. 23-64.

Canadian Climate Data and Scenarios Network.

Chu, Cindy. (2015). Climate Change Vulnerability Assessment for Inland Aquatic Ecosystems in the Great Lakes Basin, Ontario. Ontario Ministry of Natural Resources and Forestry, Science and Research Branch, Peterborough, Ontario.

Environment Canada (2018).

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Smith, J., Hunter T., Clites, A., Slow, C., Slowecki, T., Muhr, G., Gronewald, A. (2016) An expandable web-based platform for visually analyzing basin-scale hydro-climate time series data. Environmental Modelling & Software, Volume 78. p. 97-105 <http://dx.doi.org/10.1016/j.envsoft.2015.12.005>.



Subject: Global Covenant of Mayors for Climate and Energy and Carbon Disclosure Project Results

Reference:

Date to Council: April 17, 2019
Author: Karina Richters
Supervisor, Environmental Sustainability & Climate Change
519-253-7111 ext. 3226
krichters@citywindsor.ca
Pollution Control
Report Date: April 1, 2019
Clerk's File #: E/10822

To: Mayor and Members of City Council

Recommendation:

THAT the report of the City Engineer regarding Global Covenant of Mayors for Climate and Energy and Carbon Disclosure Project Results BE RECEIVED for information.

Executive Summary:

N/A

Background:

In 2015, the City of Windsor joined the Compact of Mayors. The Compact of Mayors is the world's largest cooperative effort among mayors and city officials to report and monitor greenhouse gas emissions, track progress, and evaluate climate change risks for municipalities.

The Compact of Mayors established a common platform through the Carbon Disclosure Project (CDP) to capture the impact of cities' collective actions on climate change through standardized measurement of emissions and climate risk, as well as demonstrate consistent, public reporting of their efforts.

On June 22, 2016, the Compact of Mayors and the Covenant of Mayors announced the new Global Covenant of Mayors for Climate and Energy, a newly merged initiative to bring these two efforts together. The Global Covenant of Mayors for Climate and Energy is the broadest global alliance committed to climate leadership, building on the commitment of over 9,000 cities and local governments from six continents and 127 countries representing more than 770 million residents.

Discussion:

Upon signing onto the Compact of Mayors (now referred to as the Global Covenant of Mayors for Climate and Energy), the City committed to complete and report on the following within three years:

- A greenhouse gas emissions inventory for the City within with Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories (GPC);
- An assessment of the climate hazards faced by the City of Windsor;
- The City of Windsor's greenhouse gas emissions reduction target;
- The climate vulnerabilities faced by our City.
- Our plans to address climate change mitigation and adaptation.

The City of Windsor fulfilled these requirements in 2017. The City of Windsor continues to report annually through the Carbon Disclosure Project (CDP).

Each year, the CDP provides feedback to municipalities on how to improve upon their reporting obligations. This year, the CDP released its first "report card" for municipalities as a method to compare actions amongst cities. As this is the first year for the "report card", the scores are not being publicly released. However, municipalities are free to publicly disclose their individual "report cards". The City of Windsor "report card" is attached for reference (Appendix A).

The City of Windsor received an overall score of "A-" which places us in the "Leadership" category among municipalities. A Leadership city demonstrates best practice standards working towards climate change adaptation and mitigation, has set ambitious but realistic goals and has made progress towards achieving those goals. Cities in the Leadership band have strategic, holistic plans in place to ensure the actions they are taking will reduce climate impacts and vulnerabilities to the citizens, businesses and organisations residing in their city.

The "report card" also provided recommendations for next steps for improvements. The table below looks at these next steps and provides information as to the actions currently underway at the City to improve in these areas.

Section	Next Steps Leadership Band	Activities Underway
Introduction and governance	Consider sharing your process for integrating sustainability into mainstream activities by creating a case study of your city. Join international city networks to pass on the knowledge your city has to others looking for best practice	A number of case studies have been completed outlining the work underway at the City of Windsor. These studies had not previously been submitted to CDP but will be reported in the 2019

	leadership.	disclosure.
Hazards and Adaptation	Continue regular update and monitoring of risk assessment involving vulnerable populations. Commit to ambitious adaptation targets to ensure vulnerable populations are protected in future. Consider the interaction between your adaptation and mitigation actions.	The City of Windsor is currently redeveloping the City's Climate Change Adaptation Plan which includes an updated vulnerability and risk assessment. A Community Climate Change Plan is also being development concurrently with an increased attention of vulnerable populations. Interactions between adaptation and mitigation are being considered during this planning process.
Opportunities	Cities can showcase climate resilient infrastructure projects to private sector investors through the CDP Matchmaker initiative.	Conversations have occurred with the Matchmaker initiative to determine where projects may align in the future.
City-wide Emissions	Ensure regular update and review of emissions inventory. Where changes occur in the methodology or more data is obtained, be sure to update previous inventories so data is comparable over time. Consider undertaking a consumption-based inventory for the city, which identifies GHG emissions from good and services consumed within the City.	The City and Community GHG emissions inventories are updated annually and reported bi-annually to City Council. The next report is due in the summer 2019. At this time, there is not the resources available to undertake a consumption-based inventory.

Energy and Emissions Reduction	Many cities are beginning to set emissions reduction targets that are more ambitious than the targets of the national governments. Carbon-neutral or zero carbon targets are increasingly being set by cities. Consider updating your city's action plan to incorporate a target aligned with or more ambitious than the Paris agreement goals. Consider developing a 100% renewable energy target.	The City of Windsor's current emission reduction targets are aligned with the Government of Canada's targets. As mentioned above, the 2018 GHG emissions inventory will be presented to City Council in the summer of 2019. This report will outline current status towards achieving this target.
Water	Ensure water risk is regularly assessed and incorporated into considerations when identifying emissions reduction and adaptation goals.	Climate change impacts related to water are considered in the Climate Change Adaptation Plan process underway.

The 2019 disclosure and reporting process begins in April 2019.

Having plans and targets represent an essential first step for the Global Covenant of Mayors for Climate and Energy. Implementation of these plans requires continued support and leadership for the City of Windsor to maintain this "Leadership" status.

Risk Analysis:

There are no identified risks from participating in the Global Covenant of Mayors for Climate and Energy or reporting to the CDP.

Financial Matters:

There are no financial costs associated with the participation in the Global Covenant of Mayors for Climate and Energy or reporting to the CDP.

Consultations:

None.

Conclusion:

The City of Windsor has received an overall score of "A-" which places us in the "Leadership" category among municipalities for our work in climate change mitigation and adaptation by the Global Covenant of Mayors for Climate and Energy.

Planning Act Matters:

N/A

Approvals:

Name	Title
Paul Drca	Manager, Environmental Quality
Karina Richters	Supervisor, Environmental Sustainability & Climate Change
Mark Winterton	City Engineer – Corporate Leader of Environmental Protection & Transportation
Onorio Colucci	Chief Administrative Officer

Notifications:

Name	Address	Email

Appendices:

- 1 City of Windsor CDP Cities 2018

City of Windsor

CDP Cities 2018

This snapshot report presents the score that City of Windsor received for its response to CDP's 2018 questionnaire. CDP uses the scoring methodology to incentivize cities to measure and manage environmental impacts. Responses are scored by CDP and CDP's scoring partner ADEC, using the 2018 CDP Cities Scoring Methodology. Scores are private to cities although CDP will recognize and reward the highest scoring cities.

Scoring

Score	Scoring band	Regional Average Score	Global Average Score
A-	Leadership		
<p>Scoring measures progress towards environmental stewardship</p>		<p>The bar chart above shows the count of scores achieved by cities in North America. The score for City of Windsor is shown in red.</p> <p>The bar chart above shows the count of scores achieved by cities globally. The score for City of Windsor is shown in red.</p>	

Scoring band explanation



A Leadership city demonstrates best practice standards across adaptation and mitigation, has set ambitious but realistic goals and made progress towards achieving those goals. Cities in the Leadership band have strategic, holistic plans in place to ensure the actions they are taking will reduce climate impacts and vulnerabilities of the citizens, businesses and organisations residing in their city.

	Adaptation	City-wide emissions	City-wide emissions reductions	Climate & social risk	Opportunities	Water supply
City of Windsor	B	B	B	B	B	B
North America Average	D	D	D	C	C	D
Global Average	D	D	D	D	D	D

Find more about CDP Cities at <https://www.cdp.net/en/cities>

Information reported

This panel indicates what information was provided by City of Windsor in the CDP's 2018 questionnaire which was used to determine your score. It also highlights some key points disclosed by cities globally and within your region.

Information disclosed by City of Windsor	% North America	% Globally	
Risk/Vulnerability Assessment	✓ 51%	45%	 Your city is committed to the Global Covenant of Mayors for Climate & Energy  Your city is committed to reduce its emissions by 40% by 2041 Transparency Your city disclosed publicly
Climate Adaptation Commitment	✓ 70%	58%	
Climate Adaptation Plan	✓ 35%	33%	
Climate Action Plan	✓ 56%	42%	
City-wide GHG Emissions Inventory	✓ 74%	54%	
City-wide Emissions Reduction Target	✓ 65%	46%	
Renewable Energy Target	✓ 43%	31%	

How to improve your city's score

Sections Questionnaire	Next steps Leadership band
Introduction and governance	Consider sharing your process for integrating sustainability into mainstream activities by creating a case study of your city. Join international city networks to pass on the knowledge your city has to others looking for best practice leadership.
Hazards and Adaptation	Continue regular update and monitoring of risk assessment involving vulnerable populations. Commit to ambitious adaptation targets to ensure vulnerable populations are protected in future. Consider the interaction between your adaptation and mitigation actions.
Opportunities	Cities can showcase climate resilient infrastructure projects to private sector investors through our Matchmaker initiative.
City-wide Emissions	Ensure regular update and review of emissions inventory. Where changes occur in the methodology or more data is obtained, be sure to update previous inventories so data is comparable over time. Consider undertaking a consumption-based inventory for the city, which identifies GHG emissions from goods and services consumed within the city.
Energy and Emissions reduction	Many cities are beginning to set emissions reductions targets that are more ambitious than the NDCs of their national governments. Carbon-neutral or zero carbon targets are increasingly being set by cities. Consider updating your city's action plan to incorporate a target aligned with or more ambitious than the Paris agreement goals. Consider developing a 100% renewable energy target.
Water	Ensure water risk is regularly assessed and incorporated into considerations when identifying emissions reduction and adaptation goals.

[Click here](#) for a more detailed explanation of the score per band for each section of the questionnaire, along with CDP's recommendation for cities who receive a Leadership (A-) band score.

Resources

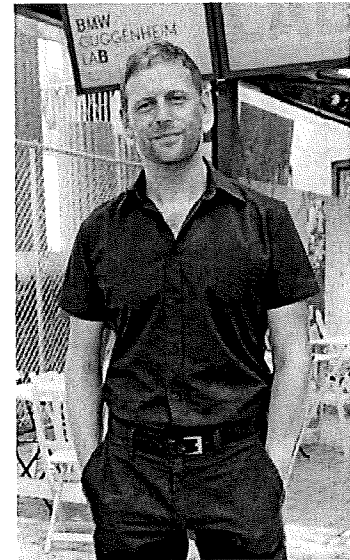
Benchmark Against Your Peers To see how your city compares to other cities, check out Cities Analytics	Explore Data Explore all public information by accessing our Open Data Portal	Connecting to Finance Showcase relevant projects through our Matchmaker Program
2018 City of Windsor Response Download your full 2018 response	Understanding the Questionnaire Read more on the topics highlighted here in the Cities Guidance	Learn and Progress Request a score feedback call, e-mail: cities@cdp.net

Find more about CDP Cities at <https://www.cdp.net/en/cities>.

Charles Montgomery creates transformative experiments, conversations and stories about cities, science, and human well-being.

He is the author of the award-winning book, Happy City, and founder of the consultancy of the same name.

Happy City examines the intersection between urban design and the emerging science of happiness. The book shows the striking ways that our cities can influence our thoughts, feelings and actions, and it offers a vision for urban renovations guided by evidence from around the world. The message is as surprising as it is hopeful: Doomsayers have warned that action to tackle the urgent challenges of climate change and energy scarcity will lead us into decades of hardship and sacrifice. But evidence in Happy City and Charles's own projects suggests the opposite: that the happier city, the healthier city, the wealthier city and the green city are the same place.



© 2011 SOLOMON R. GUGGENHEIM FOUNDATION

Charles has advised planners, students, and policy-makers across Canada, the USA and England. He has also used insights in happiness science to drive high-profile experiments that help citizens transform their relationships with each other and their cities. In 2010, his Home for the Games initiative tested the limits of trust, enabling hundreds of residents to open their homes to strangers during the Vancouver Winter Olympics. Working with the BMW Guggenheim Lab, psychologist Colin Ellard, and the citizens of New York City, he used mobile phone applications to map the emotions of public space in the Lower East Side. At the Museum of Vancouver and elsewhere, Montgomery and his collaborators create participatory programs that help citizens treat their cities as hands-on laboratories.

Charles has won numerous awards for his writing on urban planning, psychology, culture and history in magazines and journals on three continents. His first book, The Last Heathen (published internationally as *The Shark God*), won the 2005 Charles Taylor Prize for Literary Non-fiction and the Hubert Evans Prize for Non-fiction, and was short-listed for two Writers' Trust of Canada awards. Among his numerous awards is a Citation of Merit from the Canadian Meteorological and Oceanographic Society for outstanding contribution towards public understanding of climate change science.

Charles spends most of his time in East Vancouver and Mexico City.

Find more details about Happy City—the book, the movement and the team—over at the Happy City Lab.



Death of neglected young trees at airport triggers anger

Several members of the city's environmental committee are up in arms after learning a designated green space on eight acres of land of Windsor's airport that was recipient of hundreds of donated trees and shrubs was blocked off from being cared for and nearly all the young plantings died.

Dave Battagello, Windsor Star

Updated: December 3, 2018

A No Trespassing sign is shown on a fence around the Windsor Airport property near Lauzon Road and County Road 42 on Monday, December 3, 2018. A group who planted trees on the property in that area say their were denied access to care for the trees and shrubs and they have since died. Dan Janisse / Windsor Star

Members of the city-county environment committee are upset that thousands of newly planted trees and shrubs at Windsor International Airport were left to die because access was not granted to care for them.

Airport officials and city council agreed in March 2013 to allow the Essex Region Conservation Authority to access eight acres in a far east corner of the airport property for the major planting that was designed to join two woodlots.

I'd really like to hear some on the record justification why this happened

Planting day took place two months later and involved community volunteers, plus several local school children who assisted in the effort. There were up to 5,000 trees and plants put in place, according to ERCA.

"It meant a lot to me, you were filling in the gap between two woodlots," said outgoing Ward 9 Coun. Hilary Payne, who represents the area that includes the airport and was present when planting day took place.

"We are already known for having too little forest cover. It was quite a big planting and now it's all gone. It's been wiped out. The trees have died. Airport management stopped ERCA from going in. To me, it's scandalous. What a waste."

A No Trespassing sign is shown on a fence around the Windsor Airport property near Lauzon Road and County Road 42 on Monday, December 3, 2018. A group who planted trees on the property in that area say their were denied access to care for the trees and shrubs and they have since died. Dan Janisse / Windsor Star





The trees and shrubbery under the \$30,000 project were obtained by ERCA in large part through a grant from Trees Ontario. The effort was backed by the Little River Enhancement Group and Detroit River Canadian Cleanup group since it was part of the Little River improvement efforts.

After the planting occurred in early 2015 ERCA started being blocked from visiting and maintaining the site by airport management, according to Kevin Money, ERCA's director of conservation services.

"We were told that we were not allowed to enter airport lands due to safety factors," he said. "We had communication back and forth requesting access, but that was never granted. We never saw the site again."

ERCA is "disappointed we were not allowed to further the restoration project," Money said.

"Overall, ERCA and Windsor are great partners," he said. "In this case, things didn't end positively. We continue to look for ways to work with the city and do good work."

The issue of what transpired was brought in front of the Windsor Essex County Environment Committee during its meeting last week.

It was deferred so the committee can get more complete information on what transpired.

It is anticipated the issue will not return in front of WECEC until early next year given that a new four-year term of city council began on Monday and with the changeover that will also mean changes to WECEC's committee members.

The airport's director of operations Steve Tuffin said Monday that following the planting, new management was put in place at the airport and a security review was undertaken.

"We sat down, focused on safety and the elimination of risks," he said. "A huge factor can be wildlife strikes (by planes) of birds and mammals. You have coyotes, deer and wild turkeys in these woodlots. We had a short spike of coyote and deer on the runways.

"We were asked to monitor the woodlots and take notes. We looked at the area where the trees were planted and grasses. They were housing a lot of wild turkeys. When we walked through we could see not a lot of trees were left. Deer had been feeding on the seedlings and they were not in good shape."

After a report was presented to the airport's board in early 2015, a motion was passed to not allow any more planting of trees on the property, Tuffin said. It was then ERCA was denied any further access to the property.

There was never an agreement for airport staff — which is small — to maintain the planting site, Tuffin said.

In late 2015, it was estimated there was only a 10 to 15 per cent survival rate of the trees that were planted, he said.

In the spring of 2016 airport management decided to eliminate the trees and grasses and clear cut everything, Tuffin said.

The eight acres was previously used as agricultural land and within months was converted back to that as a harvested bean field — which has since remained in place, he said.

The current board and management “are not interested in planting any more trees at the airport,” Tuffin said.

“With the woodlots we already have, we know what’s in there and can actively control that,” he said. “As director of operations I’m not comfortable in providing an added home for wildlife that would increase the danger (for planes).”

Payne countered the planting was done at the direction of council and approval of the airport staff that (ERCA) could go in and maintain the trees.

“(The planting day) was a very happy occasion to say the least,” he said. “You had school kids there, everybody helping plant these trees and then this happens. It’s just awful.”

Another upset WECEC committee member is Derek Coronado, head of the Citizens Environment Alliance.

“They refused access to ERCA to get on the site and it was not maintained,” he said. “I’d really like to hear some on the record justification why this happened.”

“You had a lot of volunteers involved, especially from the Little River and Detroit River cleanup groups. This is kind of a slap in the face. It’s clear there was a directive by council this was okay and there is even language in the airport’s master plan that this kind of activity take place.”

The Detroit River Canadian Cleanup group is promoting a motion to be considered by WECEC at the next meeting that calls for the airport to “underwrite the \$30,000 cost to replace the lost trees” and agree for ERCA to be permitted on the property as required to maintain newly planted trees.

“This was a good project,” said Tom Henderson, chairman of the cleanup group’s public advisory council. “It was terrific for a lot of reasons. But then the airport refused to allow (ERCA) to do the required maintenance and maintain the trees. Now the project is done. We hope this gets considered at the next meeting, they pass it and eventually get this to council.”

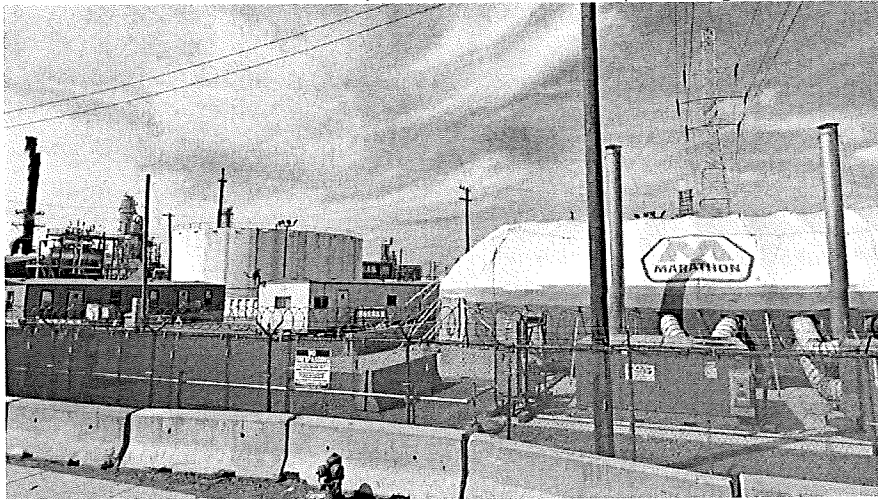
dbattagello@postmedia.com

Windsor sending objection to roofless storage of pet coke in Detroit

Marathon Petroleum wants to keep its petroleum coke pit without a roof and has applied for a variance from a City of Detroit rule.

Marathon wants exemption from a city rule mandating a roof on top of pet coke pit

CBC News · Posted: Feb 26, 2019 4:00 AM ET | Last Updated: 9 hours ago



Marathon Petroleum Company says its petroleum coke operations in the Detroit Refinery don't need a roof. (Google Street View)

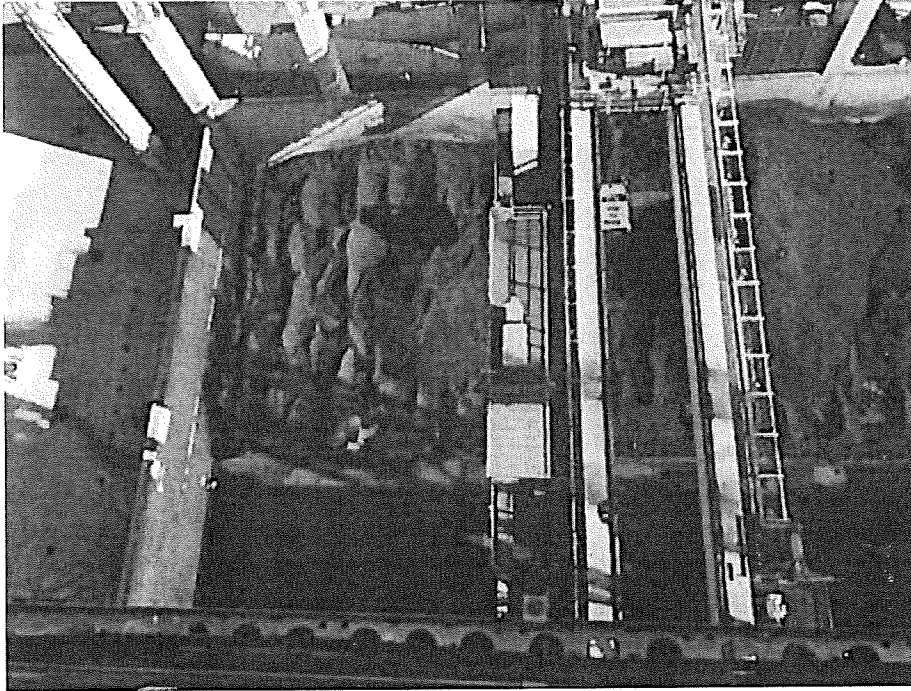
Marathon Petroleum Company doesn't want to put a roof on top of its petroleum coke pit, and the City of Windsor as well as residents in the west end have a problem with that.

Windsor's council has decided to send a letter to Detroit relaying the concerns.

According to the City of Detroit's bulk solid material ordinance, structures used to store carbonaceous substances such as pet coke must be "completely enclosed."

Currently at the Marathon refinery, the pet coke is contained by 30-foot high walls, without a roof.

The company has applied for a variance from the enclosure requirements.



An overhead view of the petroleum coke inside the pit at Detroit Refinery. (Marathon Petroleum Company)

Ward 7 Coun. Irek Kusmierczyk said they want residents to know the city is looking after their health and well-being.

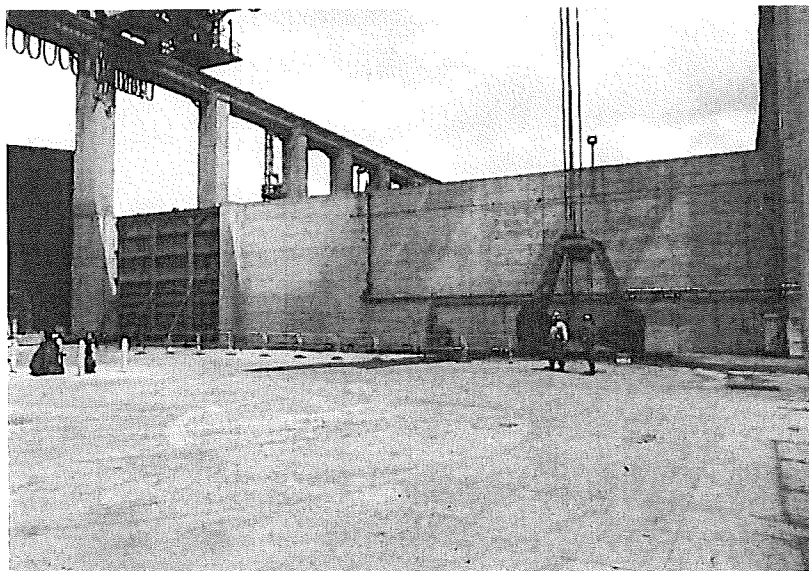
"We want to make sure that the pet coke, if it is to be stored, is going to be stored under a roof, securely, and that there will be no question whether any winds will be carrying those materials over to our side," he said.

Mary Ann Cuderman, a west-end Windsor resident, said she's worried because "our winds are predominantly from that area."

"Everyone should be getting involved and speaking up very loudly," said Cuderman.

Marathon's application to the City of Detroit indicates "all coke processing and operations conducted in the pit are conducted below the height of the walls to shield the coke from the wind."

Also, there are spray bars on the walls to keep the pet coke moisture at a level that will prevent dust from becoming airborne, according to the application.



Marathon Petroleum Company says its petroleum coke is stored in a space that is enclosed by four walls. (Marathon Petroleum Company)

Jamal Kheiry from Marathon said in an email to CBC News that "the sprinkler system operates on an as-needed basis to maintain an average moisture level of 10 per cent."

Cuderman said that's "just big business talking."

"I don't swallow that," she said about the sprinkler system. "It can't be done at all."

Despite Marathon saying the pet coke won't become airborne in its application for variance, Ward 2 Coun. Fabio Costante is still concerned, noting his ward "would be the most affected neighbourhood."

He said he hopes Windsor's letter will show Michigan that "their border partners are absolutely in concert in saying this is a wrong move."



VALERIE CRITCHLEY
CITY CLERK

*IN REPLY, PLEASE REFER
TO OUR FILE NO. _____*

COUNCIL SERVICES DEPARTMENT

March 14, 2019

Janice M. Winfrey, City Clerk
City of Detroit
Coleman A. Young Municipal Center
2 Woodward Ave. - Suite 200
Detroit, MI 48226

Dear Ms. Winfrey,

Please find this letter on behalf of Windsor City Council addressing the storage of petroleum coke on the shores of the Detroit River, Detroit Michigan.

Windsor City Council has received many complaints and concerns from our citizens regarding the variance application made by Marathon Petroleum Company to store pet coke in an uncovered storage facility on the Detroit River. Residents are concerned that the uncovered storage of pet coke in such close proximity to their homes is a threat to their health as well as to their environment.

This issue has continued to be a concern to the City of Windsor, please see attached letters from 2013 from the Windsor Essex County Environment Committee as well as Windsor City Council.

In 2017 the City of Windsor approved an update to our Environmental Master Plan. Within the Plan, Goal A: Improve Our Air Quality lists an objective to Develop strategies to reduce cross-border air pollution. In addition, Goal B: Improve Our Water Quality has an objective to improve the health of the Detroit River Watershed and Great Lakes Waters. Windsor City Council is committed to this Plan and the health of our environment.

The Detroit River is identified as an Area of Concern under the Great Lakes Water Quality Agreement due to poor water quality and environmental degradation. Canada and the U.S. have made great strides to improve the Detroit River ecosystem and we continue to collaborate to remove the river from the list of Areas of Concern.

It is our preference that storage would not be allowed at any point along the Detroit River. This large storage facility is clearly visible from our beautiful riverfront and west end residential area and is aesthetically displeasing and harmful to the image of Windsor, Detroit, Canada and the United States. It also undermines the significant efforts over the last few years to upgrade the shoreline appearance of this great international heritage river.

If pet coke must be stored along the Detroit River, ensuring that it is stored as prescribed in the City of Detroit's bulk solid material ordinance is vital to preventing the pet coke from spilling into the water or blowing into the atmosphere, potentially causing health issues for humans on both sides of the border, decreasing water quality, and endangering fish habitat in the Detroit River.

Due to the aforementioned reasons, Windsor City Council is opposed to the uncovered storage of pet coke along the Detroit River. We urge the City of Detroit to reject the variance application from Marathon Petroleum Company and require their storage facility to be enclosed.

Thank you for your time and consideration.

Sincerely,



Steve Vlachodimos
Senior Manager of Council Services/Deputy City Clerk
City of Windsor

Attachments

SV:ap

Cc: Greg Bennethum, Marathon Petroleum
David T. Roland, Refining General Manager, Marathon Petroleum
Onorio Colucci, Chief Administrative Officer, City of Windsor
Mark Winterton, City Engineer, City of Windsor



David T. Roland
Refining General Manager
Michigan Refining Division

Marathon Petroleum Company LP

March 15, 2019

1300 S. Fort Street
Detroit, MI 48217
Tel: 313.843.9100
Fax: 313.843.4850

Mr. Steve Vlachodimos
Senior Manager of Council Services/Deputy City Clerk
City of Windsor
350 City Hall Square West, Suite 530
Windsor, ON N9A 6S1

Mr. Vlachodimos,

Thank you for your March 14, 2019, letter regarding our request for a variance to the City of Detroit's bulk solids storage ordinance. I'm afraid you have been misled by erroneous news reports regarding our application – Marathon Petroleum has never stored petroleum coke along the Detroit River, and has no plans to do so in the future.

Because we share your constituents' concern for protecting the environment, our petroleum coke handling is done with the utmost care. Petroleum coke on our property – which is almost 3 miles from the Detroit River – is stored behind 30-foot high walls and kept damp (average 10 percent moisture) with a sprinkler system. All transportation and loading is done via covered conveyors and in an enclosed building with a bag-house filter installed. When we load trucks with petroleum coke on our property, we wash their wheels before they leave to avoid depositing dust on public roadways.

These are only a few of the precautions we take. I would encourage you, the Windsor Essex County Environment Committee, and the Windsor City Council to read the enclosed details of our petroleum coke handling operation. The fact sheet also includes a point-by-point delineation of the provisions of the city ordinance from which we are seeking variances, as well as the reasons for those variance requests. The fact sheet is publicly available by going to www.detroitrefinery.com and clicking on the link entitled, "Fact sheet on petroleum coke handling at the Detroit refinery."

We gladly invite you and any member of City Council for a tour of our coke operation, so that you can view the environmentally responsible way that we process petroleum coke. If you have any additional questions, please don't hesitate to contact me.

Sincerely,

Dave Roland
Refinery General Manager

CITY OF WINDSOR
COUNCIL SERVICES

MAR 20 2019

RECEIVED

Cc:
Vlachodimos, Steve svlachodimos@citywindsor.ca
Colucci, Onorio ocolucci@citywindsor.ca
Winterton, Mark mwinterton@citywindsor.ca
Parent, Averil aparent@citywindsor.ca
Foot, William wfoot@citywindsor.ca

Marathon Petroleum uses a variety of methods to effectively control dust

Bulk solid material storage and handling operations at the Detroit Refinery are regulated by the Michigan Department of Environmental Quality's Air Quality Division (Renewable Operating Permit No. MI-ROP-A9831-2012c). In accordance with this permit, Marathon Petroleum has implemented an approved Fugitive Dust Control Plan that satisfies applicable provisions of the Natural Resources and Environmental Protection Act and Michigan's Administrative Rules for Air Pollution Control.

Below are the methods we use for fugitive dust control and minimization, including dust from refinery operations, construction activities, and petroleum coke processing and transport operations.

Fugitive Dust Control and Minimization Practices

Control of Petroleum Coke Operations

- **Coke Pit and Wall** – Petroleum coke generated from the refinery coker unit is staged in a pit, which is surrounded by 30-foot tall walls to prevent wind erosion. Coke height is maintained below the height of the wall. The coke has a high surface moisture content when it's discharged from the coker unit drums to the pit.
- **Coke Pit Sprinkler System** – The sprinkler system is used when needed to increase the moisture content of the coke.
- **Enclosed Coke Transfer System** – This transfer system is fully enclosed and all air is filtered through bag houses in both the load-out building and crusher building.
- **Truck Load-out Building** – The loading of coke into trucks for off-site transport occurs in an enclosed building with an air curtain and bag house filter.
- **Vehicle Covers** – Coke transport trucks must be covered before leaving the truck load-out building.
- **Truck Wheel Wash System** – Prior to exiting the refinery truck load-out building, trucks pass through a wheel wash system designed to remove excess dust from the wheels, lower section of the trailer, and the rear of the trailer.
- **Visible Emissions Monitoring** – Visible emissions observations are conducted by the coke handling operators daily to confirm that the fugitive dust program is properly minimizing emissions from the coke processing and transport operations.

General Fugitive Dust Control Practices

- **On-site Speed Limits** – Vehicles travel at posted speed limits to reduce fugitive dust.
- **Vehicle Covers** – Material transport vehicles are kept covered, except when loading or unloading.
- **On-site Road Cleaning** – A street sweeper or water truck operates as needed to reduce fugitive dust emissions from on-site roadways. An approved dust suppressant may also be used to reduce emissions, if needed.
- **Visible Emissions Monitoring** – Visible emissions observations are conducted by trained personnel, on a monthly basis, to confirm that the fugitive dust program is properly minimizing emissions from on-site roadways.

Enhanced Street Sweeping Program – The Detroit Refinery has voluntarily implemented an enhanced street sweeping program designed to reduce fugitive dust emissions from nearby

roadways, including Oakwood Blvd., Dix Road, Schaefer Ave., and Fort Street. The street sweeping program is conducted a minimum of twice per month from April through September.

Perimeter Air Monitoring System (PAMS) – Marathon operates four air monitoring stations surrounding the refinery. In addition to other constituents, the four monitors continually measure particulate matter emissions.

We are asking for variances from the Bulk Solid Materials Ordinance for some of its provisions. Here are the variances, and why we are requesting them:

- a) Sec. 22-5-16(c) Opacity measurement test method

MPC is already required to conduct daily visual emissions observations as part of its Renewable Operating Permit (ROP). The ordinance requires opacity monitoring utilizing a different test method (U.S. EPA Method 9d), which is redundant.

- b) Sec. 22-5-20(a) Wind monitor location

MPC has a network of four perimeter air monitoring stations with two weather stations. These weather stations are representative of weather conditions at the coke pad/pit.

- c) Sec. 22-5-22(d) Rumble strips for outgoing material transport trucks

MPC's truck loadout building is equipped with dust control on the loading chute and a wheel wash station as the truck exits the building. These measures provide dust control superior to rumble strips.

- d) Sec. 22-5-29 Roadway Cleaning

MPC has implemented an enhanced street sweeping program as part of its fugitive dust control plan maintained in accordance with its ROP.

- e) Sec. 22-5-40 Enclosure of Carbonaceous Bulk Solid Materials

Sec. 22-5-41 Enclosure Plan

Sec. 22-5-42 Enclosure Requirements.

Sec. 22-5-71 Enclosure Deadline

Sec. 22-5-72 Enclosure Reporting

MPC has a robust fugitive dust management program in compliance with MDEQ requirements and its ROP. The program includes controls to limit particulate matter emissions from coke production and handling. These include

- **Use of water curtain system which coke passes through when discharged from the drums into the pit.**
- **Maintaining an adequate moisture content in the coke (avg. 10%)**
- **A five-sided coke pad/pit area with water spray systems to maintain moisture and eliminate dust.**
- **Visual monitoring for fugitive dust.**
- **A bridge crane (vs. front end loader) to minimized coke handling and potential for dust emissions.**
- **A totally enclosed coke conveyor and truck loadout system with water spray and particulate emissions controls.**