

Adopted by Council at its meeting held September 21, 2015 [M390-2015]  
/AC

Windsor, Ontario September 21, 2015

**REPORT NO. 288** of the  
**ENVIRONMENT, TRANSPORTATION & PUBLIC SAFETY**  
**STANDING COMMITTEE**  
of its meeting held August 26, 2015

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**Present:** Councillor Fred Francis  
Councillor Chris Holt  
Councillor Hilary Payne (Vice Chair)  
Councillor Paul Borrelli

**Regrets:** Councillor Bill Marra

That the following recommendations of the Environment, Transportation and Public Safety Standing Committee **BE APPROVED:**

Moved by Councillor Borrelli, seconded by Councillor Holt,

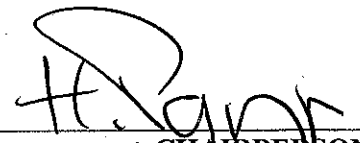

I. That Council **RECEIVE** the update regarding the replacement of SMOG Advisories with the new Provincial Air Quality Health Index alert program; and

II. That Council **DIRECT** administration to review, update and **REPORT BACK** to Council with a review and update, if appropriate, of the Windsor's Smog Action Plan and By-Law 233-2001 based on the new Air Quality Health Index.

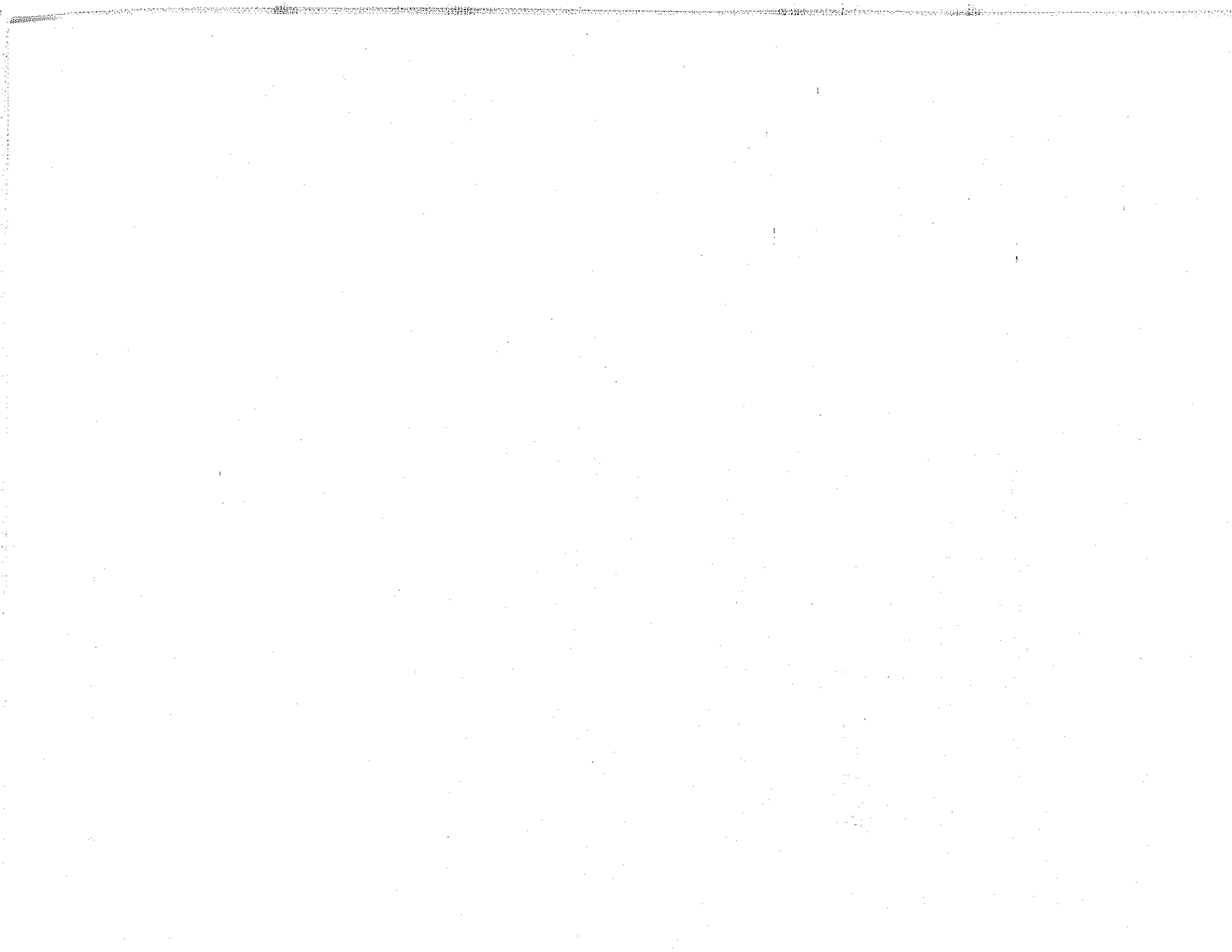
Carried.

**Livelihood #17833, EI2015**

Clerk's Note: The administrative report authored by the Supervisor of Environmental Sustainability and Climate Change dated July 9, 2015 entitled "*SMOG Advisories replaced with the new Provincial Air Quality Health Index alert program*" is **attached** as background information.

  
\_\_\_\_\_  
CHAIRPERSON  
  
\_\_\_\_\_  
SUPERVISOR OF COUNCIL SERVICES

NOTIFICATION:	
NAME	CONTACT INFORMATION
WECEC	



**THE CORPORATION OF THE CITY OF WINDSOR**  
**Environment, Transportation & Public Safety Standing Committee -**  
**Admin Report - Environment Transportation**



**MISSION STATEMENT:**

*"Our City is built on relationships – between citizens and their government, businesses and public institutions, city and region – all interconnected, mutually supportive, and focused on the brightest future we can create together."*

<b>LiveLink REPORT #: 17833 EI2015</b>	<b>Report Date: July 9, 2015</b>
<b>Author's Name: Karina Richters</b>	<b>Date to Standing Committee: August 26, 2015</b> #5004 jc-07/17/15:eb
<b>Author's Phone: 519 253-7111 ext. 3226</b>	<b>Classification #:</b>
<b>Author's E-mail: krichters@citywindsor.ca</b>	

**To: Environment, Transportation & Public Safety Standing Committee**

**Subject: SMOG Advisories replaced with the new Provincial Air Quality Health Index alert program**

**1. RECOMMENDATION: City Wide:  Ward(s): \_\_\_\_\_**

- I. That Council **RECEIVE** the update regarding the replacement of SMOG Advisories with the new Provincial Air Quality Health Index alert program; and
- II. That Council **DIRECT** administration to review, update and **REPORT BACK** to Council with a review and update, if appropriate, of the Windsor's Smog Action Plan and By-Law 233-2001 based on the new Air Quality Health Index.

**EXECUTIVE SUMMARY:**

N/A

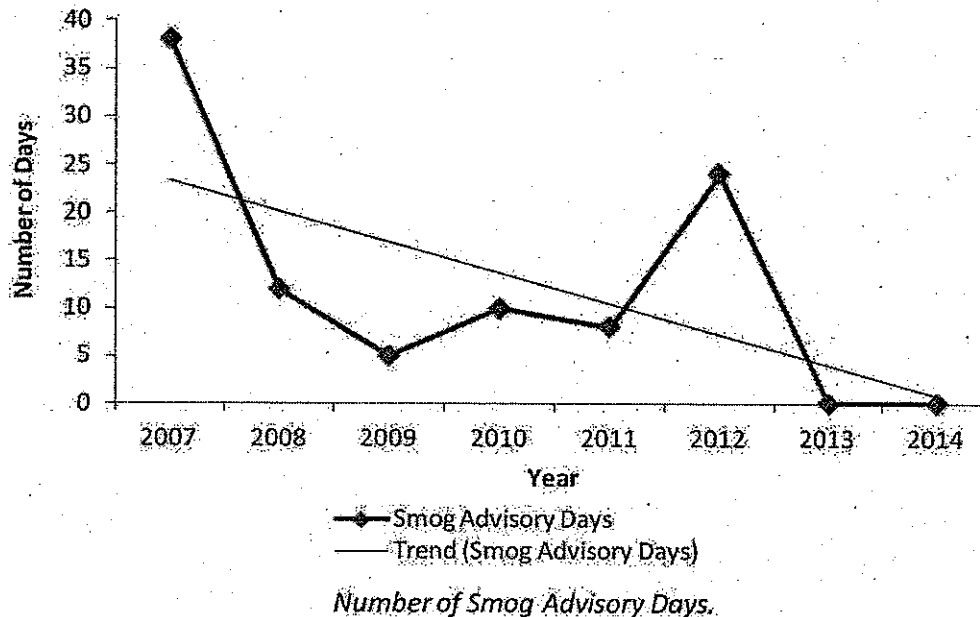
**2. BACKGROUND:**

The City of Windsor has been monitoring the Ontario Smog Alert network for approximately two decades. In July 1998, the Citizens Environment Alliance (CEA) proposed the development of a Smog Action Plan which was supported by City Council. These concerns also spearheaded the resurrection of the Windsor Essex County Air Quality Committee (WECAQC), now known as the Windsor Essex County Environment Committee. The Great Lakes Institute for Environmental Research (GLIER) developed a report which provided the foundations for Windsor's Smog Action Plan (Appendix A). Once developed, the WECAQC's agenda generally dealt with implementing the Plan.

In 2001, the Commissioner of Parks and Recreation and the Commissioner of Public Works reported on steps to be taken by City staff on poor air quality days. Actions included reduction of herbicide spraying and a reduction in the use of gas-powered parks maintenance equipment.

In 2003, the City of Windsor undertook a pilot project with Environment Canada to offer free transit service on four Smog Advisory Days. Transit Windsor observed a significant ridership increases of up to 50 percent on these free transit days, and received positive feedback and media coverage.

The number of Smog Advisory Days has also been tracked as an environmental indicator in the Report on the State of the Environment. The following graph shows the number of Smog Advisory Days since the inception of the Environmental Master Plan.



Up until recently, the Province of Ontario was issuing Smog Advisory Days based on the Air Quality Index (AQI) as an indicator of air quality. The AQI was reported based on a scale of 0 to 100+. A rating above 50 on the AQI indicated a poor air quality day and a Smog Advisory alert was issued.

On June 24, 2015 the AQI was replaced with the Air Quality Health Index (AQHI).

### 3. DISCUSSION:

#### Air Quality Health Index

Similar to the AQI, the AQHI uses a scale system to report on air quality. The formula that calculates the Air Quality Health Index is based on research conducted by Health Canada using health and air quality data collected in major cities across Canada.

The AQHI was designed as a health protection tool to help individuals make decisions to protect their health by limiting short-term exposure to air pollution and adjusting their activity levels during increased levels of air pollution. It also provides advice on how residents can improve air quality in their local community.

The index pays particular attention to people who are sensitive to air pollution and provides them with advice on how to protect their health during air quality levels associated with low, moderate, high and very high health risks.

The AQHI has four primary objectives:

1. Measuring air quality in relation to an individual's health on a scale from 1 to 10. The higher the number on the AQHI, the greater the health risk to individuals.
2. Assigning a level of health risk associated with the index reading (e.g. Low, Moderate, High or Very High Health Risk).
3. Providing health messages customized to each health risk category for both the general population and the 'at risk' population.
4. Reporting historical, current and forecasted hourly AQHI readings.

The AQHI represents the relative health risk to an individual based on the levels of common air pollutants which are known to harm human health. Three pollutants were chosen as indicators of the overall outdoor air mixture: ground level ozone, fine particulate matter, and nitrogen dioxide.

The table below provides the health messages for each category of the AQHI for the "at risk" and general populations.

Health Risk	Air Quality Health Index	Health Messages	
		At Risk Population*	General Population
Low	1-3	Enjoy your usual outdoor activities.	Ideal air quality for outdoor activities.
Moderate	4-6	Consider reducing or rescheduling strenuous activities outdoors if you are experiencing symptoms.	No need to modify your usual outdoor activities unless you experience symptoms such as coughing and throat irritation.
High	7-10	Reduce or reschedule strenuous activities outdoors. Children and the elderly should also take it easy.	Consider reducing or rescheduling strenuous activities outdoors if you experience symptoms such as coughing and throat irritation.
Very High	10+	Avoid strenuous activities outdoors. Children and the elderly should also avoid outdoor physical exertion.	Reduce or reschedule strenuous activities outdoors, especially if you experience symptoms such as coughing and throat irritation.

\* People with heart or breathing problems are at greater risk. Follow your doctor's usual advice about exercising and managing your condition.

With the launch of the new AQHI, the AQI and subsequent Smog Alert program has been discontinued and Smog Advisory Days based on AQI values will no longer be issued. In place of the Smog Alert program, a new air quality alerting system is now in effect based on the values reported by the AQHI. Subscribers to the Smog Alert program will be automatically transferred to the new alerting system. The results of the AQHI will be communicated through the new air quality alerting system as follows:

**Special Air Quality Statements (SAQS):** When the Air Quality Health Index is forecast to reach, or has reached the high risk category for one to two hours, a SAQS will be issued. A SAQS will also be issued if the AQHI has not reached the high risk category, however there is an air quality concern for a particular area that is expected to last for at least three hours. The purpose of a SAQS is to be precautionary and to be vigilant of your health.

**Smog and Air Health Advisory (SAHA):** For situations where the AQHI is forecast to reach, or has reached, the high risk category, and is expected to last for at least three hours, a SAHA will be issued.

**Termination Notice:** A termination notice is issued once the Smog and Air Health Advisory has ended.

Both the SAQS and SAHA are issued jointly by Environment Canada and the Ontario Ministry of the Environment and Climate Change. Since the launch of the program, Windsor-Essex County has been issued one Special Air Quality Statement on July 6<sup>th</sup> 2015 (Appendix B).

As noted above, Smog Advisories have been reported in the Report on the State of the Environment (ROSE) as an indicator for local air quality. This change will affect how this indicator is reported in the ROSE. As the two indices were developed with different objectives in mind the indexes should not be compared. The new AQHI captures the health risk from air pollution while the AQI provides us with information on the quality of the air compared to Canadian air quality standards and/or criteria for pollutions. Because of the changes in the indices, Environment Canada notes that there is bound to be a difference in the perceived air quality in various communities.

### Air Zone Management

Another initiative underway by the Province of Ontario is the use of air zone management. On June 22, 2015 the Province of Ontario posted their Delineation of Ontario Air Zones on the Environmental Bill of Rights (EBR 012-4347). Air zone management is an approach for managing and improving air quality. It involves: selecting and setting indicators and air standards (including limits and triggers or thresholds), monitoring and modelling to assess air quality, and implementing appropriate actions and activities to manage air.

Many elements of air zone management already take place in Ontario; however, the Ministry of Environment and Climate Change will be looking at whether air quality management can be enhanced through the development and implementation of a more comprehensive and integrated approach.

The Ministry of Environment and Climate Change is proposing three air zones:

- **Zone 1** – Areas with limited pollution from either point or non-point sources or transboundary influence; where the air quality management activities are focused on maintaining good air quality.
- **Zone 2** – Areas under pressure from multiple sources including some or all of the following: non-point sources, smaller point sources, individual large industrial point sources, transboundary influences; where air quality management activities are focused on multiple broad-based initiatives targeting many sources.
- **Zone 3** – Areas with a concentration of large industrial sources, where air quality management activities are focused on the abatement of local industrial emissions as well as non-industrial sources.

Windsor and Essex County are located in Zone 2.

## Windsor's Smog Action Plan

Due to the recent changes to Provincial air quality monitoring as well as the length of time since the Smog Action Plan was developed, administration is recommending a review and update of Windsor's Smog Action Plan and By-law 233-2011 (A By-Law to Prohibit Excessive Idling of Vehicles and Boats). The development of the original plan included a number of consultations, which should also occur with the review. Consultations should involve (but not be limited to) the Windsor Essex County Environment Committee, the Windsor Essex County Health Unit and various City departments including Fleet, Parks, Public Works and Transit Windsor.

### 4. RISK ANALYSIS:

There are no significant or critical risks to the City associated with the new Provincial AQHI alerting system, air zone management system, or the undertaking of a Smog Action Plan review and update.

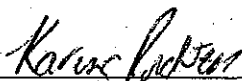
### 5. FINANCIAL MATTERS:

A review and update of the Smog Action Plan and By-Law 233-2001 will be completed in-house at no additional cost to the City.

### 6. CONSULTATIONS:

### 7. CONCLUSION:

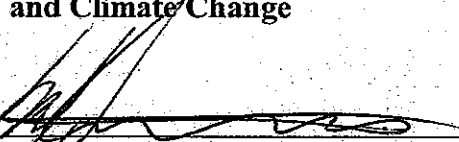
Based on past environmental attitude surveys Air Quality continues to be the number one environmental concern of Windsor residents. To address this concern, Goal A of the Environmental Master Plan is to Improve our Air and Water Quality. The recent change at the Provincial level to the Air Quality Health Index (AQHI) provides an opportune time to revisit the City of Windsor's Smog Action Plan and By-Law 233-2001.



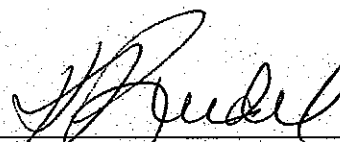
**Karina Richters**  
Supervisor, Environmental Sustainability  
and Climate Change



**Chris Manzon**  
Senior Manager of Pollution Control



**Mark Winterton**  
City Engineer and Corporate Leader  
Environmental Protection and  
Transportation



**Helga Reidel**  
Chief Administrative Officer

**APPENDICES:****Appendix A: Table 4 of the Smog Action Plan****Appendix B: Special Air Quality Statement on July 6<sup>th</sup> 2015****DEPARTMENTS/OTHERS CONSULTED:****Name:****Phone #: 519            ext.****NOTIFICATION :**

Name	Address	Email Address	Telephone	FAX



Table 4. Potential Local Smog Prevention Initiatives

<b>I. PROMOTION OF ALTERNATIVE TRAVEL</b>	
<b>ACTION</b>	<b>LEAD PARTY</b>
<b>a. General</b>	
1. Develop and implement regional transportation plan with a view to improving air quality.	Municipalities (WALTS)
2. That the City of Windsor commit to a timetable for rerouting diesel trucks away from the tunnel and downtown core and further to a traffic engineering study of truck traffic on Huron Church Road.	Municipalities
<b>b. Human Powered Transportation</b>	
1. Enhance infrastructure (bicycle lanes/paths, sidewalks, racks, mixed mode)	Municipalities
2. Provide support for employees (showers, secure storage for bicycles, financial incentives to ride or walk)	Public/Private employers
3. Require staff to walk or cycle when appropriate (e.g., police, parking enforcement, couriers, deliveries)	Municipalities
4. Require provision of secure bicycle storage in new developments	Municipalities
5. Promote walking and cycling through education and partnership with community groups and local businesses (e.g., bike share program, "walking school bus")	Coalition

ACTION	LEAD PARTY
<p><b>c. Transit Use</b></p> <ol style="list-style-type: none"> <li>1. Develop and implement incentives to encourage increased transit use (e.g., subsidize transit passes, education)</li> <li>2. Study feasibility of regional express buses</li> <li>3. Promote corporate commuter service</li> <li>4. Develop options for rural residents</li> <li>5. Study options for more efficient transit operations, preferential fare structure, financial support, infrastructure (express lanes)</li> <li>6. Enhance public education program to encourage ridership</li> </ol>	<p><b>Municipalities; Public/Private Employers</b></p> <p><b>Municipalities, Transit Windsor</b></p> <p><b>Coalition with Public/Private employers</b></p> <p><b>Municipalities; WECAQC</b></p> <p><b>Municipalities, Transit Windsor</b></p> <p><b>WECAQC with Transit Windsor</b></p>
<p><b>ACTION</b></p> <p><b>d. Ride Sharing</b></p> <ol style="list-style-type: none"> <li>1. Provide economic and other incentives to promote ride sharing; remove disincentives (e.g., subsidized parking, priority parking spaces/tol, guaranteed ride)</li> <li>2. Provide assistance for development of trip reduction programs (e.g., education, ride matching service, challenge programs)</li> <li>3. Designate priority lanes for ride share vehicles</li> </ol>	<p><b>LEAD PARTY</b></p> <p><b>Public/Private employers</b></p> <p><b>WECAQC</b></p> <p><b>Municipalities</b></p>

ACTION	LEAD PARTY
<p><b>e. Boat Services</b></p> <p>1. Study feasibility of water taxi or passenger ferry service between regional locations</p>	<p>WECAQC</p>
<p><b>f. Discourage Motor Vehicle Use</b></p> <p>1. Decrease amount of land dedicated to vehicles through promotion of denser development, mixed-use communities; provide incentives to developers (consistent with official plan policies)</p> <p>2. Restrict use of private cars (from certain areas, every other day, etc.)</p> <p>3. Modify parking policies and by-law requirements (e.g., shift subsidies from parking to transit or alternatives, raise parking fees, raise parking permit fee for second car, by-law to reduce number of paved spaces provided in new developments and redevelopments)</p>	<p>Municipalities, through implementation of official plans</p> <p>Municipalities</p> <p>Municipalities</p>
<p><b>g. Alternative Work Options</b></p> <p>1. Allow flexible hours to avoid peak road use</p> <p>2. Telecommuting (work at home, satellite offices)</p> <p>3. Teleconferencing/video-conferencing in lieu of driving to meetings</p>	<p>Public/Private Employers</p> <p>Public/Private Employers</p> <p>Public/Private Employers</p>
<p><b>II. REDUCTION OF EMISSIONS FROM VEHICLES AND EQUIPMENT</b></p>	

ACTION	LEAD PARTY
<b>a. Fleet and Equipment Reduction and Replacement</b>	
1. Initiate program to replace fleet of vehicles with alternative fuel, zero emission vehicles; program to replace high emissions equipment	Fleet owners
2. Promote fleet reduction/replacement for local businesses through cooperative programs	WECAQC
3. Study feasibility of lawn mower, other equipment or vehicle buy-back or rebate program	WECAQC

<p><b>b. Emissions Reduction</b></p> <ol style="list-style-type: none"> <li>1. Adopt and enforce idling control by-law</li> <li>2. Install anti-idling timer on fleet vehicles</li> <li>3. Use reformulated gasoline, low sulphur fuel and alternative fuels</li> <li>4. Encourage the availability of low sulphur gasoline (prior to regulatory deadline) and alternative fuels at retail stations</li> <li>5. Require contracting or leasing companies to comply with specified standards for vehicles and equipment or with certification programs (such as Drive Clean)</li> <li>6. Implement an inspection and maintenance program for fleet vehicles</li> <li>7. Require installation of vapour recovery systems at fleet refueling stations</li> <li>8. Support regulations to mandate vapour recovery at retail fuel stations</li> <li>9. Lobby and cooperate with other levels of government to accelerate and improve mandatory emissions testing programs, anti-tampering regulations, air quality standards</li> </ol>	<p>Municipalities</p> <p>Fleet owners</p> <p>Fleet owners</p> <p>WECAQC</p> <p>Public and private entities</p> <p>Fleet owners</p> <p>Municipalities</p> <p>Municipalities, WECAQC</p> <p>Municipalities, WECAQC</p>
<p><b>III. ENERGY USE REDUCTION</b></p>	
<p><b>ACTION</b></p> <p><b>a. Power Sources</b></p> <ol style="list-style-type: none"> <li>1. Promote use of cogeneration, district heating and cooling</li> <li>2. Procure electricity from alternative power (non-coal fired) sources</li> </ol>	<p><b>LEAD PARTY</b></p> <p>Municipalities</p> <p>Municipalities, utilities</p>

<p><b>b. Energy Efficiency</b></p> <ol style="list-style-type: none"> <li>1. Retrofit existing buildings for energy and hot water efficiency; promote private sector retrofit through cooperatives programmes (e.g., Toronto's Better Buildings Partnership)</li> <li>2. Promote energy efficiency in new design and construction</li> </ol>	<p>Municipalities, WECAQC</p> <p>Municipalities</p>
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ACTION	LEAD PARTY
<p><b>c. Reduce Urban Heat Island Effect</b></p> <ol style="list-style-type: none"> <li>1. Use lighter colour pavement and roofing; alternatives to paved surfaces</li> <li>2. Use strategic tree planting to shade pavement and buildings</li> <li>3. Protect existing shade trees</li> <li>4. Increase green space (reclaim pavement), restore natural areas, naturalized planting (to reduce amount of grass), native species</li> <li>5. Develop and implement program to promote shade tree planting and use of roof gardens on public and private property</li> </ol>	<p>Municipalities</p> <p>Municipalities</p> <p>Municipalities</p> <p>Municipalities, WECAQC</p> <p>WECAQC</p>
<p><b>IV. OTHER</b></p>	

<p><b>a. Smog Prevention and Reduction Plan Implementation</b></p> <ol style="list-style-type: none"> <li>1. Establish clean air fund; direct fees, fines and other moneys into the fund (to be used for anti-smog initiatives)</li> <li>2. Set emissions reductions targets</li> <li>3. Establish program for plan evaluation; audits</li> </ol>	<p>Municipalities</p> <p>WECAQC</p> <p>WECAQC</p>
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ACTION	LEAD PARTY
<p><b>b. Education and Communication</b></p> <ol style="list-style-type: none"> <li>1. Develop and implement a comprehensive smog prevention education and communication plan</li> <li>2. Prepare annual report on smog action and goal achievement</li> <li>3. Establish awards for meeting or exceeding smog goals or for innovative smog reduction ideas</li> </ol>	<p>Air quality coordinator with WECAQC</p> <p>Air quality coordinator with WECAQC</p> <p>WECAQC</p>
<p><b>c. Particulate and Dust Reduction</b></p> <ol style="list-style-type: none"> <li>1. Develop program for dust suppression at construction sites and aggregate storage facilities</li> <li>2. Develop program for dust reduction from roads</li> </ol>	<p>Private sector</p> <p>Municipalities</p>
<p><b>d. Phase Out of Cosmetic Use of Pesticides</b></p> <ol style="list-style-type: none"> <li>1. Educate on alternatives to pesticide use, "green" lawn care</li> </ol>	<p>Air quality coordinator</p>

From: [admin@airqualityontario.com](mailto:admin@airqualityontario.com)  
To: Eichers, Karla  
Subject: \*\* Special Air Quality Statement \*\*  
Date: Monday, July 06, 2015 7:04:31 PM

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*Please do not reply to this e-mail. For general inquiries about air quality alerts, or if you are experiencing technical difficulties, e-mail: [AqWeather.Office.moe@ontario.ca](mailto:AqWeather.Office.moe@ontario.ca). For media inquiries call the media line at (416) 314-6666.*

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A Special Air Quality Statement\* has been issued jointly by Environment Canada and the Ontario Ministry of the Environment and Climate Change for the following forecast region(s):

Windsor-Essex-Chatham-Kent

Issued For: Monday July 6, 2015

Windsor - Essex - Chatham - Kent

For more details visit the Air Quality Ontario website at: [www.airqualityontario.com](http://www.airqualityontario.com)

A Special Air Quality Statement is in place due to high levels of air pollution, specifically ground-level ozone. Individuals may experience symptoms such as increased coughing, throat irritation, headaches or shortness of breath. Children, seniors and those with cardiovascular or lung disease, such as asthma, are especially at risk. If you, or someone in your care, develop symptoms, reduce or reschedule strenuous outdoor activities where ever possible until the air quality improves.

\* When the Air Quality Health Index is forecast to reach, or has reached, the high risk category for one to two hours, a Special Air Quality Statement will be issued. A Special Air Quality Statement will also be issued if the Air Quality Health Index has not reached the high risk category, however there is an air quality concern for a particular area that is expected to last for at least three hours.

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#### Spare the Air Actions

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During a smog advisory, there are a number of actions that you can take to help spare the air.

Travel tips - all year round:

- leave your car at home - walk, cycle, carpool or take public transit
- tele-conference instead of driving to meetings
- limit car trips by doing all your errands at once, and do not let your engine idle
- keep your car well tuned, check your tire pressure and drive at moderate speeds



**Health tips:**

- avoid exposure to vehicle exhaust fumes
- consult your doctor for specific health advice
- wear light clothing at work while air conditioning is reduced
- avoid strenuous exercise in the heat of the day

**Electricity saving tips:**

- save electricity at home by setting your air conditioner temperature a few degrees higher (health permitting) and turning off lights you are not using

**Other pollution reduction tips:**

- leave lawn mowing for another day
- restrict the use of gasoline-powered equipment
- delay using oil-based paints, solvents and cleaners

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