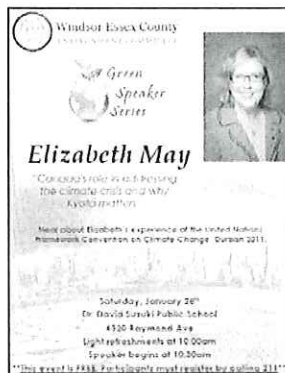


Windsor Essex County Environment Committee Green Speaker Series Presenters

2012



Elizabeth May
Green Party Leader

"Canada's Role in Addressing the Climate Crisis and Why Kyoto Matters"

Not only was Canada's responsibility to mitigate climate change discussed, May's recent trip to the United Nations Framework Convention on Climate Change was discussed.



Gord Miller
Environment Commissioner of Ontario

"Climate Change and Biodiversity Challenges for Southwestern Ontario"

Discussed potential biodiversity challenges for our ecosystem as a result of a changing climate.

Jim McKenzie, Chitra Gowda

Principal, Federal Commissioner of the Environment and Sustainable Development; Water Quality Specialist, Essex Region Conservation Authority

"Blue Green Algae"

Educated participants on the federal and local responsibilities and initiatives and their impact on Windsor and Essex County.

2013



Dan Burden

Co-Founder and Director of Innovation and Inspiration at the Walkable and Livable Communities Institute

"How can Windsor Better Create Walkable and Livable Communities"

The informative session discussed the positive benefits of walkable streets for communities and economies. This speaker series was accompanied by a walking audit along Wyandotte between Argyle and Parent Avenues.

Windsor Essex County Environment Committee Green Speaker Series Presenters

Dr. David Suzuki

Founder, David Suzuki Foundation

The complicated relationship people and industry have with the environment was discussed. The discussion explored the intricate relationship between economics and the environment.

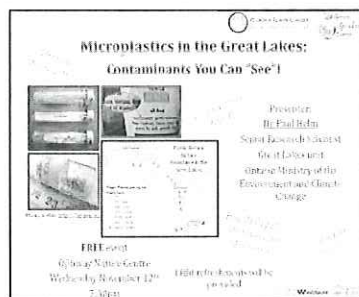
Dr. John Hartig, Richard Wyma

Manager, Detroit River International Wildlife Refuge; General Manager, Essex Region Conservation Authority

“From Heritage River to Conservation Vision to International Action: The Conservation Opportunities along the Detroit River”

Conservation opportunities and conservation strategies and priorities along the Detroit River were discussed, also includes the Canadian Registry of Lands in partnership with the Detroit River International Wildlife Refuge.

2014

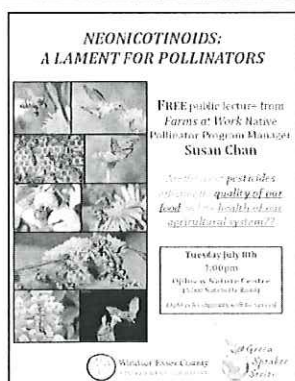


Dr. Paul Helm

Senior Research Scientist Great Lakes Unit, Ontario Ministry of the Environment and Climate Change

“Microplastics in the Great Lakes: Contaminants You Can “See”!”

Answered questions surrounding microplastics and their impacts on ecosystems. The presentation also included how people can help keep microplastics from entering the environment.



Susan Chan

Native Pollinator Program Manager, Farms at Work

“Neonicotinoids: A Lament for Pollinators”

Provided answers of the impacts of pesticides and quality of food and the health of the agricultural system.

2015



Sarah Elton

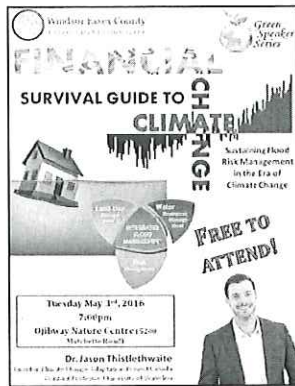
Author of “Consumed” and “Locavor”

“Consumed: Food for a Finite Planet”

With an interest in food systems, Sarah presented on food production for a sustainable future for healthy, local food in the face of climate change and population growth.

Windsor Essex County Environment Committee Green Speaker Series Presenters

2016



Dr. Jason Thistlewaite

Director, Climate Change Adaptation Project Canada
Assistant Professor, University of Waterloo

“A Financial Survival Guide to Climate Change”

An expert in flood risk governance, he spoke on sustainable flood risk management and how to address the most significant disaster threat facing Canadian Cities.



Peter Garforth

Principal, Garforth International, llc

“Why Communities Should Have an Energy Plan”

Delivered a presentation on the merits of a Community Energy Plan to control costs, enable entrepreneurship, foster job growth and economic development, and meet the demands of a rapidly changing energy system. This presentation helped promote the public engagement for the City of Windsor’s Community Energy Plan.



Kevin Money

Essex Region Conservation Authority

Ken Vegh

Town of Kingsville

LuAnn Marentette

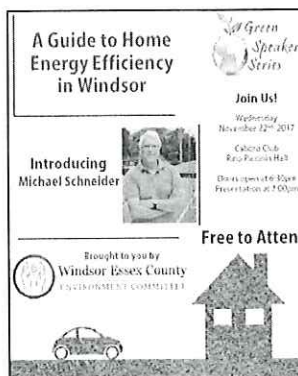
Town of Leamington

Colin Cassin

Ontario Invasive Plant Council

“Invasive Phragmites: Expert Panel”

Explored the significant issues surrounding invasive Phragmites.



2017

Michael Schneider

Green Sun Rising Inc.

“A Guide to Home Energy Efficiency in Windsor”

Provided guidance to homeowners on home energy efficiency. He showcased his own home as an example that these measures are achievable in Windsor – Essex County.

WECEC Priorities 2018

List of Priority Themes and Corresponding Objectives

Transportation

- Walkability, complete streets, trails, active transportation
- Anti-Idling
- Bike Lanes
- Active Transportation in both the City of Windsor and Essex County

Public Awareness

- Right to Know by-law
- Awareness of local climate change impacts and threats
- Know Your City tour
- Involvement in surrounding Municipal events and actions
- Youth engagement
- Responsible sewer use for City of Windsor and Essex County

Pollution and Climate Change

- Greening the City – including green roofs and green infrastructure
- Review of existing tree cutting bylaw
- Pollution issues, cancer causing environmental issues
- Parkway natural areas
- Invasive species awareness and control
- Banning of plastic bags

Current List of Subcommittees

1. Air
2. Environmentally Sensitive Lands and Issues

Contents Processing Centre Earth Day

The Contents Processing Centre wants to bring awareness to the Windsor Essex Community about what we do. CPC promotes to RESTORE | DON'T REPLACE.

CPC was created to help the restoration companies clean the contents after a disaster such as fire or floods. However after the two mayor recent floods in Windsor, we notice the insurance companies do not really promote to their home owners what we can clean, their goal is to try and close the file as quickly as possible when there a large volume of claims.

Our thoughts to having this Earth Day Event will let the public know what we do and hope to have them contact us directly or request their insurance to use us. We will have an open house to show all the things we can clean from electronics, hard items, tools, documents and even restore photos.

Helping to keep good items off our landfills.

The Open House will be held on **Friday April 20th from 11:30am – 2:30pm at our Contents Processing Centre location 4500 North Talbot Road, Tecumseh.**

We want to partner with companies and charities that promote GREEN by having them as a vendor/sponsor.

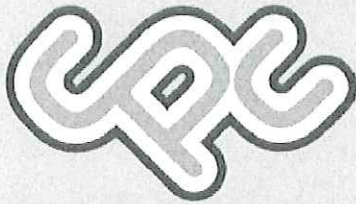
This is our first year hosting the event, we are not looking for mayor sponsors, but more partnerships with organizations that fits with our mission of helping protect our planet. For anyone who wants to donate items to the public that is attending or help with any cost involved that would be great.

We will be advertising on the Radio, Community Calendars, Social Media outlets and hope to reach out to your audience through your network as well.

I am happy to bring you and your team to our CPC location for a quick tour so we can discuss in person. Let me know what day of the week/time works best for you so we can work together in making our planet better

Note, we do have a boardroom and classroom should you want to host one of your committee meetings at our location one day, that would be a great opportunity to visit our facility.

Contents Processing Centre Earth Day



EARTH DAY OPEN HOUSE

Let's work together towards
a greener planet.

APRIL 20 | 11:30 AM - 2:30 PM
CONTENTS PROCESSING CENTRE

4500 North Talbot Rd | Tecumseh ON | 519.737.0322

FREE LUNCH | PRIZES | VENDORS | NETWORKING
DROP OFF YOUR OLD ELECTRONICS FOR RECYCLE

Register by April 13th, 2018 at www.cpcwindsor.com/earthday

Follow us on Social Media:

#EarthDayYQG

#CPCgreen

TOWNEPLACE
SUITES
MARRIOTT



www.personalservicecoffee.ca



Thank you to all our sponsors & community partners

March 1, 2018

Newsletter

Environmental Bill of Rights Registry

- ❖ **EBR #013-1837** #CycleON: Action Plan 2.0 (March 7)
- ❖ **EBR #013-2314** Families First Funeral Home & Tribute Centre Inc. (March 16)
- ❖ **EBR #013-2330** The Canadian Transit Company (March 4)
- ❖ **EBR #013-1835** Hiram Walker & Sons Limited (Decision)
- ❖ **EBR #013-1831** Smith Contracting Inc. (Decision)
- ❖ **EBR #013-2295** 419599 Ontario Limited (March 15)
- ❖ **EBR #012-7383** Ministry of the Environment and Climate (Information)
- ❖ **EBR #013-2368** Kingsville Stamping Limited (March 30)
- ❖ **EBR #013-1208** Policy Proposal Public Lands Act Administrative fees (Decision)
- ❖ **EBR #013-1817** Watershed Planning Guidance (April 7)
- ❖ **EBR #013-2325** Mine Methane Capture Offset Protocol (April 2)
- ❖ **EBR #013-2401** Rosati Construction Inc. (April 1)
- ❖ **EBR #013-2364** Ozone Depleting Substances Offset Protocol (April 2)
- ❖ **EBR #013-0426** Modifications to Ontario Regulation 311/06 for the Growth Plan, 2017 (Decision)
- ❖ **EBR #013-2449** Ontario Regulation 19/74 was amended (Information)
- ❖ **EBR #013-2408** Additional time to prepare habitat regulations (Information)
- ❖ **EBR #013-0751** Response to final recovery strategies for 6 species at risk (Decision)
- ❖ **EBR #013-2099** Updating the Part II Order request process under the Environmental Assessment Act (April 13)



Windsor Essex County ENVIRONMENT COMMITTEE

Essex Region Conservation Authority & Detroit River Canadian Clean Up

- ❖ ERCA has partnered with Caldwell First Nation in Leamington to create wetland habitat.
- ❖ ERCA has joined the City of Windsor and Michigan on the fight against and awareness of Oak Wilt.
- ❖ DRCC has achieved thirty years of progress; see what they've done with their new story map.
- ❖ ERCA has set 2018 priorities for the Essex Region's environment.
- ❖ Monday, February 19, 2018 ERCA issued a flood watch for the entire Essex Region.

Essex County

- ❖ County Road 20 is currently undergoing a class Environmental Assessment.
- ❖ Record breaking rainfall in February caused Lakeshore to ask residents to refrain from using excess water for the sake of the sewer.
- ❖ CWATS is aiming to complete 793 km of cycle lanes, paved shoulders and multi-use trails in Essex County.



University of Windsor

- ❖ Dr. Rupp Carriveau, along with other University of Windsor engineering professors held the Operations and Maintenance Summit 2018 to discuss clean energy in Canada's future.
- ❖ University of Windsor has achieved a high ranking for their environmental commitment by scoring high on Green Rating measures.

City of Windsor

- ❖ The Environmental Sustainability and Climate Change Office presented the updated Environmental Master Plan to the Environment, Transportation and Public Safety Committee on February 21.
- ❖ The City of Windsor did receive reports of flooding in the area the week of February 19th.

Important February Dates

- ❖ **February 2:** WWF's National World Sweater Day
- ❖ **February 14:** Essex County Field Naturalists Club Meeting
- ❖ **February 17:** Point Pelee Dark Sky Night
- ❖ **February 20:** ERCA Winter Walk
- ❖ **February 21:** City of Windsor Environment, Transportation and Public Safety Standing Committee Meeting
- ❖ **February 24:** Windsor Essex Maker Faire at St. Clair College
- ❖ **February 26:** ERCA Homeschool Days
- ❖ **February 26:** Bob McDonald addresses University of Windsor providing insight to "Surviving the Third Millennium"

Environment Fact

Paper can only be recycled 6 times. The fibres then become too weak to hold together

In the News

- ❖ NASA deems 2017 as the second hottest year on record, without the help of El Nino. The NOAA put 2017 as the third hottest year following the years 2016 and 2015.
- ❖ Canada's only UNESCO World Heritage Site, the Rideau Canal Skateway is seeing shorter skating seasons because of climate change.
- ❖ Environmental Commissioner of Ontario mentions Windsor flooding as a result of climate change in the Ontario's Climate Act from Plan to Progress.
- ❖ Climate trends are emerging in Canada and this 'weird weather' is being noticed by Canadian insurers.
- ❖ Essex County weather has caused ice cracks on Lake Erie that had residents feeling tremors.
- ❖ Climate change is causing people to rethink if they should have children. The quality of life (regarding environmental phenomenon) for children is a main concern for those contemplating children.
- ❖ Edmonton is hosting the first Cities and Climate Change Science Conference, March 5-7. This event is to showcase and encourage local leadership.
- ❖ Changes have been made to the Canadian Environmental Assessment Act and Agency; they are now referred to as the Impact Assessment Act and Agency. Minister McKenna announced environmental assessment changes to streamline projects.
- ❖ Ontario has surpassed Quebec claiming the spot for most electric cars sold in Canada for 2017.
- ❖ The Thames River in London experienced significant flooding after receiving the largest flow volume since 1977. Along with London, Brantford has declared a state of emergency due to overflow of the Grand River. Chatham-Kent issued a state of emergency due to severe flooding
- ❖ The Arctic is showcasing its changing climate by reaching temperatures above zero in its 2017/18 winter. It is one its hottest years on record which has caused the Arctic to be warmer than some parts of Europe during some days in February.
- ❖ Environment and Climate Change Canada and the Government of Ontario partnered to establish the Canada-Ontario Lake Erie Action Plan to address Lake Erie's water quality. EBR #012-9971.



Windsor Essex County
ENVIRONMENT COMMITTEE

March						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4 ERCA Maple Syrup Festival	5	6	7	8 ERCA Marsh monitoring training workshop	9	10
11	12	13 ERCA Maple March Break Maple Moon	14 Essex County Field Naturalists Club Meeting	15 ERCA Maple March Break	16	17 Point Pelee Dark Sky Night
18	19	20	21	22 World Water Day	23	24 Earth Hour Charles Clark Square Pelee Island Bird Observatory "A Night of Music and Migration" Citizens Environmental Alliance Annual Meeting
25 ERCA Maple Dinner	26 DRCC Making Waves Movie Night	27	28	29	30	31 Caesars Windsor Code Green Expo
April						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5 WECEC Meeting	6	7
8	9	10	11 Essex County Field Naturalists Club Meeting	12	13	14
15	16	17	18	19	20 Contents Processing Centre Earth Day Event	21
22 City of Windsor Earth Day Event ERCA Earth Day Tree Planting	23	24	25	26	27	28
29	30					

Governments of Ontario and Canada release action plan to reduce harmful algal blooms in Lake Erie

Over One Hundred and Twenty Actions with Partners to Restore Health of Lake Erie

February 22, 2018 3:15 P.M.

Protecting and managing water quality in our lakes and rivers is essential for the well-being of Canadians, our environment and economic prosperity. Safeguarding our environment and growing our economy go hand in hand.

This is why today, the Governments of Canada and Ontario have released the final Lake Erie Action Plan.

The plan identifies more than 120 federal, provincial and partner actions, using mandatory and voluntary approaches, to help achieve the goal of reducing phosphorus entering Lake Erie by 40 per cent. The plan will be reviewed and revised as needed over time to ensure continued progress towards achievement of targets.

Phosphorus enters Lake Erie from many sources, including runoff from agricultural lands, urban centres, sewage treatment plants and septic systems. Actions in the plan to reduce phosphorus loads include upgrading municipal wastewater treatment and collection systems, encouraging effective techniques to keep phosphorus on farmland and out of the watershed and improving wetland conservation.

Phosphorus is a primary cause of harmful algal blooms that can have a wide range of impacts on the environment, human health and the economy: water quality, fish and wildlife populations and habitats are degraded; beaches are fouled; water intakes are clogged, commercial fisheries are at risk, and toxins can also pose a risk to humans.

The action plan was developed following extensive public engagement and close collaboration with Indigenous communities, municipalities, agricultural organizations, conservation authorities, interest groups, and others.

Indigenous peoples, as stewards of the land, have been valued partners in the development of this action plan. Canada and Ontario will continue to work in partnership with Indigenous communities within the Lake Erie basin to help implement the plan.

The agricultural sector also continues to be a leading partner in efforts to reduce phosphorus entering Lake Erie from agricultural land, and adopting ways to reduce their overall environmental impact.

The Canada-Ontario Lake Erie Action Plan is an important milestone to protect the shared waters of the Great Lakes, and meets commitments under the Canada-U.S. Great Lakes Water Quality Agreement and the Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health. The plan also meets commitments under the Ontario Great Lakes Protection Act and Ontario's agreements with U.S. states.

QUOTES

" Protecting and restoring the health of Lake Erie is vitally important to everyone in Ontario. Building on our Great Lakes Protection Act and working collaboratively with Canada and our partners, we are creating cleaner, more sustainable waters, healthier and stronger communities, and a better future for generations to come."

- Chris Ballard

Ontario Minister of the Environment and Climate Change

" The Great Lakes are a treasured resource for all Canadians. Through the Lake Erie Action Plan, we are working with our partners and delivering on a key commitment under the Great Lakes Water Quality Agreement. Together, we are protecting our environment and strengthening our economy, and in doing so, improving freshwater resources so Canadians can swim, drink, and fish."

- Catherine McKenna

Minister of Environment Climate Change

" Canadian farmers know the value of protecting our land and water through the use of sustainable practices. The Government of Canada is committed to working with Ontario and the agriculture sector to protect and restore water resources through support for on-farm environment action and scientific research related to the management of phosphorus in the Lake Erie basin."

- Lawrence MacAulay

Minister of Agriculture and Agri-Food

" I am pleased that Ontario's agriculture sector continues to be a leader in identifying and implementing ways to reduce phosphorus entering our Great Lakes. By working together with our partners, Ontario will continue to address this vital environmental matter."

- Jeff Leal

Ontario Minister of Agriculture, Food and Rural Affairs

" The Great Lakes are vitally important to the quality of life, economic prosperity and overall wellbeing of Ontarians. It is imperative that we make every effort to respond to issues that threaten the health of the Great Lakes, and the Lake Erie Action Plan is a significant step towards ensuring that the ecosystem health of Lake Erie recovers and continues to provide all of the opportunities we've come to enjoy."

- Nathalie Des Rosiers

Ontario Minister of Natural Resources and Forestry

QUICK FACTS

- Lake Erie is the shallowest and most biologically productive of the Great Lakes, and it receives high loads of phosphorus, making it highly susceptible to harmful blue-green and nuisance algal blooms.
- Estimates indicate that these blooms could cost the Canadian Lake Erie basin economy \$272M annually.
- Algal blooms impact the enjoyment of the lake for millions of people in the region.
- Research shows we can expect an economic return of up to \$2 for every dollar we invest to improve the health of the Great Lakes.
- The action plan meets commitments under Ontario's Great Lakes Protection Act.
- Ontario's Great Lakes Basin is home to about 40 per cent of Canada's economic activity.

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Disponible en Français

Canada – Ontario Lake Erie Action Plan Summary

February 2018

This Action Plan reinforces a collective responsibility for environmental management. Phosphorous has historically been a problem in Lake Erie, and this problem continues today. High levels of Phosphorous can promote algal growth creating low-oxygen zones in water which threaten the Lake Erie watershed. This plan also calls for coordination and collaboration among different stakeholders which includes different levels of government, conservation authorities, and the community. Algal blooms from cyanobacteria in Lake Erie's western basin, along with low oxygen levels in the central basin in the Cladophora algae in the eastern basin are a cause for concern for Lake Erie.

Windsor-Essex is located at the western basin of Lake Erie and impacts Lake Erie and Lake St. Clair. The plan has over 120 actions which aim to address different categories to tackle the phosphorus in Lake Erie which are provided below. The bolded actions directly reference the western basin, Windsor-Essex County or Lake St. Clair specifically.

Reduce Phosphorous Loadings

Support watershed and nearshore-based strategies and community-based planning for reducing phosphorus loadings.

1. Collaborate with landowners, municipalities, conservation authorities, Indigenous communities, and others on a co-ordinated approach to watershed planning for reducing phosphorus loadings.
2. Canada and Ontario will continue to work with conservation authorities, municipalities and other partners to promote implementation of existing watershed plans focused on reducing phosphorous loadings in the Lake Erie basin and develop new ones as required.
3. Canada, with Ontario's support, will continue to work with conservation authorities and other partners to identify phosphorous sources and develop phosphorus reduction management strategies and plans for selected tributaries/regions in the Lake Erie watershed, including the Sydenham River, Thames River, Kettle Creek, Catfish Creek and the Grand River.
4. Canada and Ontario will continue working with Indigenous communities in the Lake Erie watershed to support efforts to identify phosphorus sources and develop appropriate phosphorus reduction strategies for these communities.
5. Canada, with Ontario's support, is leading the implementation of the binational nearshore assessment and management framework for Lake Erie.
6. Canada and Ontario will focus phosphorus reduction efforts within Lake Erie's eastern basin on the Grand River watershed.
7. **Canada and Ontario will explore the development of initiatives that support the implementation of local actions within high-risk areas for phosphorus loadings in the western and central basins of Lake Erie, including the Thames River watershed and Leamington tributaries.**
8. Canada and Ontario will continue to support the conservation and restoration of Ontario's wetlands through programs.
9. Nature Conservancy of Canada will conduct a review of Lake Erie planning documents to guide its conservation efforts in the Lake Erie watershed.

Reduce phosphorus loadings from urban areas

10. Canada and Ontario will continue to promote eligible investments for the reduction of excess phosphorus from sources, such as municipal wastewater treatment systems or municipal stormwater effluent, under applicable infrastructure and other funding programs.
11. Ontario will work with municipal partners to establish by 2020 a legal effluent discharge limit (in Environmental Compliance Approvals) of 0.5 milligrams per litre of total phosphorus for all municipal wastewater treatment plants in the Lake Erie basin that have an average daily flow capacity of 3.78 million litres or more.
12. Ontario will, where feasible, work with municipal partners toward reducing loadings through:
 - a. Upgrades, including incorporation of innovative technologies and other modifications, to secondary water treatment plants that have an average daily flow capacity of 3.78 million litres or more in the Lake Erie basin. With an objective of approaching the phosphorus effluent concentrations achievable through a tertiary level of treatment.
 - b. Improvements to wastewater treatment and collection infrastructure to reduce combined sewer overflows and bypasses.
 - c. Improvements to stormwater management systems (including facility rehabilitation and incorporation of green infrastructure and innovative treatment technologies).
13. Ontario will continue to collaborate with municipal partners to promote and encourage optimization of wastewater treatment as a way for municipalities to improve treatment plant performance (including lower phosphorus discharges) and achieve operational efficiencies.
14. Ontario will continue to support area-wide optimization programs for municipal water treatment plants to reduce phosphorus loads, with Lake Erie as the priority geography for this effort.
15. **Ontario will work with developers, municipalities, conservation authorities and others to promote and support the use of green infrastructure and low impact developments systems for stormwater management, including clarifying and enhancing policies as well as developing green standards. Ontario's draft stormwater low impact development guidance manual is aimed at helping proponents implement low impact development and green infrastructure and is expected to be available in 2018.**
16. **The Municipality of Leamington, located in the priority area of the Leamington tributaries, will work with partners to explore opportunities to reduce phosphorus loadings through upgrades to their wastewater collection system to service commercial facilities (including greenhouse operations) and residential properties currently serviced by septic systems.**
17. The City of London will undertake a pilot project using new technologies as an alternative to conventional tertiary treatment with the objective of achieving effluent quality of 0.1 milligrams per litre. Upon successful completion of the pilot project, the City of London will then develop a plan to rollout phosphorus reduction technologies to their five major treatment plants.
18. The City of London will accelerate plans to separate combined sewers, including the design and construction of necessary stormwater outlets, with the target of separating 80 per cent (17 kilometres) of its combined sewer system by 2025.

19. The City of London will circulate for agency and public review by the end of June 2018 an implementation plan that provides the scope and timing for managing the highest priority sanitary sewer overflows as identified in its pollution prevention and control plan. To support implementation, the City will facilitate a proof-of-concept, in-field pilot project of high-rate treatment technologies with the support of industry (Trojan Technologies) and academic (Western University) partners, and will continue its private property weeping tile disconnection program.
20. The City of London will incorporate low impact development and adaptive environmental management principles into the Ministry of the Environment and Climate Change's Dingman Creek subwatershed area-wide Environmental Compliance Approval pilot project. The City will also implement a program to maximize the treatment and infiltration of stormwater using low impact development technologies in built-out areas in co-ordination with its linear infrastructure renewal program.
21. The City of London will expand its current monitoring program to prioritize the retrofitting of stormwater ponds and will develop a stormwater pond to improve operational performance and legacy phosphorus removal. To support this program, the City will evaluate the need to develop a stormwater sediment handling with the goal of repurposing stormwater pond sediment and appropriately managing the legacy phosphorus contained within it.

Reduce phosphorus loadings from agricultural and rural areas

22. Canada and Ontario will continue to leverage existing funding initiatives (e.g., *Species at Risk Farm Incentive Program*) to support the implementation of agricultural best management practices (BMP) and environmental investments in targeted regions of the Lake Erie basin.
23. Canada will create an application-based funding program in 2018 that provides \$4.1 million over four years in financial support for projects demonstrating effectiveness of BMPs and/or innovative approaches to reducing phosphorus loads to Lake Erie.
24. **Canada and Ontario will pursue, under the next federal-provincial *Canada Agricultural Partnership*, initiatives that support a multi-BMP, whole-farm approach to achieve phosphorus runoff reduction from farmland in the western and central basins.**
25. Canada and Ontario will ensure public land is managed to minimize phosphorus losses.
26. Canada and Ontario will encourage dam owners to explore managing dams to reduce phosphorus outputs (without compromising aquatic invasive species management or hydroelectric power generation).
27. **Ontario will continue to work with greenhouse growers to encourage nutrient recycling and reduce phosphorus levels in discharges to watercourses that flow into Lake Erie and Lake St. Clair, with a priority on the Leamington area and Thames River. Actions include education and awareness, innovation, monitoring, cost-shared investments, and regulatory compliance and enforcement.**
28. Ontario will work with the Lake Erie community to carry out measures to restore native habitats (including wetlands and riparian habitat), focusing efforts in priority watersheds where phosphorus loadings are high and natural cover is low.
29. Ontario will encourage stewardship activities on private lands that support phosphorus reduction in Lake Erie by providing incentives for landowners through programs such as the *Conservation Land Tax Incentive Program* and the *50 Million Tree Program*.

30. Ontario, with Canada's support, will work with the agriculture sector to harmonize and streamline planning tools (e.g., *Environmental Farm Plans*, *Farmland Health Check-Up*, nutrient management planning, soil management BMPs, evaluation and monitoring tools) to support an integrated, whole farm approach to environmental sustainability.
31. 4R Ontario will lead the implementation of a voluntary *4R Nutrient Stewardship* program based on the internationally-recognized *4R Nutrient Stewardship* system. The program will promote the adoption of nutrient management in Ontario to help farmers reduce nutrient losses into the environment and improve productivity through efficient nutrient application.
32. The Ontario greenhouse Vegetable Growers will continue its work through the *Ontario Greenhouse Environmental Strategy* working group to support compliance efforts by providing educational material and templates to assist the greenhouse sector in adhering to regulatory requirements and to explore options for monitoring, research and remediation of priority subwatersheds.
33. The Ontario Cover Crops Steering Committee, led by Grain Farmers of Ontario, will implement the *Ontario Cover Crops Strategy* to encourage widespread adoption of cover crops on farms in Ontario.
34. The Ontario Federation of Agriculture will work within the Thames River Phosphorus Reduction Collaborative partnership and with Grow Ontario Together - a coalition of vested commodity organizations – to promote a suite of effective land management and drainage solutions for agriculture to reduce phosphorus loss and improve water quality in the Thames River. The federation will continue to support other relevant initiatives such as the *Ontario Cover Crops Strategy*, the *Timing Matters* initiatives and *4R Nutrient Stewardship*.
35. ALUS (Alternative Land Use Services) Elgin will use marginal, environmentally sensitive and inaccessible parcels of land to mitigate and reduce phosphorus loading into Lake Erie and the Thames River by prioritizing sites with active erosion occurring and that are situated along a watercourse or wetland.
36. Conservation authorities, as the second largest land owner next to the Province will manage their lands to minimize phosphorus losses.
37. Conservation authorities will continue to provide on-farm technical assistance and administer and deliver financial assistance programs for landowners to implement soil erosion control and best management practices related to the reduction of soil and nutrient loss.
38. Ducks Unlimited Canada, in partnership with the Ministry of Natural Resources and Forestry, will implement a wetland restoration initiative in the Lake Erie basin to support conservation efforts with landowners and local organizations that help reduce phosphorus loads entering Lake Erie.
39. **Nature Conservancy of Canada will continue to strategically conserve and restore lands in the Essex Forests and Wetlands, Southern Norfolk Sand Plain and Western Lake Erie Island natural areas that will contribute to reducing non-point sources of phosphorus.**
40. Nature Conservancy of Canada will participate and support partners to undertake initiatives that are actively seeking solutions to Lake Erie's water problems.
41. Nature Conservancy of Canada will continue to work with partners to conserve and restore significant Lake Erie coastal wetlands to improve ecosystem health and resiliency.

Ensure Effective Policies, Programs and Legislation

Support and strengthen policies, programs and legislation

42. Canada and Ontario will, in collaboration with the United States, reassess in 2020 the viability of setting science-based numeric targets for the eastern basin.
43. Canada will continue to work on revisions to the *Feeds Regulations* that would remove minimum nutrient levels for livestock feeds (including phosphorus). These revisions are anticipated to be enacted in 2018 and will enable the industry to be more flexible and decrease levels of phosphorus in feeds where it makes sense to do so. The revised regulations will likely result in a corresponding reduction in phosphorus content of manure.
44. Ontario will engage with key sectors as it considers further restrictions on the application of nutrients during the non-growing season with a focus on conditions when there is higher risk of nutrient loss, such as when the ground is frozen or snow covered.
45. Ontario's *General Regulation under the Nutrient Management Act* requires farms to have an approved nutrient management strategy when they submit applications for building permits for any buildings or structures that are used to house farm animals or to store manure on the land of the farm. Between January 1, 2005 and January 1, 2018 approximately 5000 nutrient management strategies were approved where an application for a building permit was made.
46. Ontario will, in 2018, begin a review of the Province's approach to rural stormwater and agricultural drainage management using an integrated watershed approach. This will include an examination of the interactions between runoff from rural lands and roads, outlet drainage from agricultural lands, and municipal drains with the objective of identifying opportunities to improve the sustainable management of water.
47. Ontario will, as part of the hauled sewage policy and program review, develop and post for public comment a draft policy framework for managing hauled sewage in the province.
48. Ontario will work within partners to update provincial policies for Lake Erie by 2019 to provide the basis for establishing a legal effluent discharge limit (in Environmental Compliance Approvals) of 0.5 milligrams per litre of total phosphorus for all municipal water treatment plants in the Lake Erie basin that have an average daily flow capacity of 3.78 million litres or more.
49. Ontario will update existing wastewater policies (i.e., F-series guidelines and procedures) and develop stormwater management policies and supporting guidance (e.g., low impact development and green infrastructure) by 2021 to enhance environmental protection, including reduction of nutrient loadings.
50. Ontario will provide updated guidance related to stormwater management and planning, to support the implementation of policies in the *Provincial Policy Statement* (2014).
51. Ontario will, through the implementation of a *Wetland Conservation Strategy* for Ontario, improve wetland conservation to achieve a net gain in wetland area and function to sustain biodiversity and to provide ecosystem services, including improved water quality.
52. Ontario will, where feasible, streamline processes for environmental assessment and approvals related to wastewater and stormwater projects with a phosphorus reduction component within the Lake Erie basin.

Strengthen decision making tools

53. Ontario will, with Canada's support, make publicly available in 2018 a digital elevation model of the Lake Erie watershed (based on LiDAR technology) to assist all members of the Lake Erie community in making evidence-based decisions (e.g., flood mapping, areas of soil erosion risk identification, precision agriculture) to ensure healthy lands and waters.
54. Ontario will work with municipalities to encourage the use (e.g., low impact development guidance) and development (e.g., by-laws) of decision-making tools that help reduce phosphorus through management of urban stormwater at the source.
55. Conservation authorities will continue to support analysis and reporting of information and data for decision making, including optimizing rural BMPs to improve water quality and using advanced GIS technologies and approaches to target locations for improved soil and nutrient management.

Improve the Knowledge Base

Conduct monitoring and modelling

56. Canada, with support from Ontario and conservation authorities, will use monitoring and modelling to provide annual assessments of phosphorus loads entering Lake Erie from Canadian sources.
57. Conservation authorities will continue to work with other stakeholders and Canada and Ontario at the watershed, subwatershed and catchment levels to conduct research, monitoring and modelling activities on an annual basis to improve scientific efforts toward phosphorus reduction.
58. Canada, starting in 2016 and in collaboration with partners, will develop a decision-making tool to improve and standardize the calculation of phosphorus loads to Lake Erie and the other Great Lakes to inform decision making.
59. Canada, Ontario and conservation authorities began in 2017 to implement a nested watershed monitoring approach in the Thames River to model and track nutrient dynamics and changes over time.
60. **Canada will monitor and assess the temporal trends and spatial distributions of nutrient concentrations and nuisance algae (*Cladophora*) biomass in the nearshore areas of Lake Erie's eastern basin.**
61. Canada will develop and apply remote sensing tools to detect and forecast harmful algal blooms in Lake Erie.
62. Canada will collect and co-ordinate hydraulic and hydrologic data, including maintaining Canada's role on the Canada – U.S. Coordinating Committee on Great Lakes Basin Hydraulic and Hydrologic Data, to ensure accurate flow information is available to calculate season and annual phosphorus loads.
63. Conservation authorities will collect, maintain, compile and share hydraulic and hydrologic data in partnerships with Canada and Ontario, for example through the Water Survey of Canada Hydrometric Monitoring Network Agreement.

64. Ontario, with support from Conservation Ontario and conservation authorities, will continue long-term monitoring programs in the watershed including the Provincial Water Quality Monitoring Network and the Provincial Groundwater Monitoring Network.
65. Ontario will continue to implement the long-term Great Lakes water intake and nearshore monitoring programs.
66. Canada and Ontario will deploy real-time monitoring systems in Lake Erie to monitor temperature, dissolved oxygen and algal pigments to enable tracking of hypoxia and lake stratification.
67. Canada will continue to produce an annual national field-scale crop inventory map using remotely-sense imagery.
68. Canada, with support from its partners, will continue to develop, improve and apply Soil and Water Assessment Tool models for the Grand and Thames Rivers to identify and provide advice to partners on strategies for optimizing BMPs.
69. Canada, with support from Ontario and other partners, will continue to improve models and tools at two scales for risk of phosphorus loss: the soil-landscape scale (Indicator of Risk of Water Contamination by Phosphorus [IROWC-P]) and the field scale (P-Index).
70. Nature Conservancy of Canada will investigate opportunities to measure and model the water quality and quantity benefits of its land acquisition and restoration work.
71. The City of London will co-ordinate its water quality monitoring with the Upper Thames River Conservation Authority to aid river improvement efforts and studies.

Conduct research to better understand nutrient dynamics in the Lake Erie basin

72. Ontario will continue a multi-watershed nutrient study to assess the interaction between agricultural land use and nutrient loadings in streams in the Great Lakes basin.
73. Ontario will support and conduct research on the use of sensor-based technology for monitoring phosphorus and associated parameters.
74. Canada and Ontario will conduct research to improve the understanding of factors contributing to toxic and nuisance algae growth and their impacts on water quality and ecosystem health.
75. **Ontario, with support from Canada, will undertake a monitoring and research project to better understand the sources and types of phosphorus that are contributing to nearshore algal blooms in Lake St. Clair.**
76. Canada, with Ontario's support, will lead research and monitoring to improve understanding of invasive mussels and their influence on phosphorus dynamics and *Cladophora* growth in the eastern basin of Lake Erie.
77. Ontario will work with the Lake Erie community to conserve and manage aquatic habitat and the fish community to maintain fish population health and resiliency.
78. Ontario will lead research on the bioaccumulation of the algal toxin microcystin in fish tissue to better understand its impact on human health.
79. Canada will investigate how land use changes in small Lake Erie tributaries are affecting instream water quality conditions, including the role of episodic wastewater releases and factors that have an impact on the effectiveness of agricultural BMPs.
80. Canada, in collaboration with partners, will investigate how nutrients other than phosphorus, particularly nitrogen, may contribute to harmful algal bloom development and toxicity.

81. Canada, in collaboration with partners, will investigate the potential role that internal loading and nutrient exchanges may have on the recovery of Lake Erie as external loads are reduced.
82. **Canada will develop and apply next generation physical limnology and ecological models, including integrated watershed-lake models, for Lake Erie and Lake St. Clair to improve understanding of the casual factors affecting the development of algal blooms and hypoxia, and how phosphorus reductions from tributaries will affect those factors.**
83. Canada will improve and apply the *Cladophora* growth model to determine the relationship between *Cladophora* growth and phosphorus loadings.

Conduct research to better understand and predict the impact of climate change on the Lake Erie ecosystem

84. Canada, starting in 2017 and with support from conservation authorities, will run watershed simulation models under different climate change scenarios to understand how phosphorus loss from the land may change.
85. Canada will deploy long-term climate buoys in the Great Lakes to determine the influence of climate change on the Great Lakes, including nutrient loading and in-lake conditions. Data sets will be made publicly available.
86. Canada, starting in 2017, will investigate the exchange of nutrients between groundwater and surface water in the Thames River watershed to better understand the relationship between seasonal and year-to-year nutrient fluxes, land use and climate variations.
87. Ontario will take climate change into account in all of its research and monitoring efforts relating to Lake Erie. Ontario will also encourage municipalities to apply to the *Municipal GHG Challenge Fund* to support eligible projects that make significant contributions to reducing green house gas emissions and phosphorus loads.
88. Ontario will develop and implement initiatives that encourage soil health management practices which reduce net greenhouse gas emissions and reduce agricultural soil erosion.

Conduct research to improve existing practices and develop new innovative practice and technologies to reduce phosphorus loadings

89. Ontario will continue to leverage government research programs and initiatives (e.g., *New Directions*; Ontario Ministry of Agriculture, Food and Rural Affairs – University of Guelph partnership) to fund needed research and new technologies to test and improve agricultural BMPs for phosphorus reduction.
90. Canada and Ontario, in partnership with others, will continue to research the effectiveness of BMPs in reducing phosphorus losses from agricultural land during typical and extreme weather events.
91. Canada will continue to identify the capacity and progress of different agricultural production systems in implementing activities that reduce the risk of nutrient loss.
92. Canada will continue to develop and assess methods for evaluating sustainable phosphorus levels in soils.
93. Canada and Ontario, in partnership with others, will continue to conduct research to improve modelling capability to quantify phosphorus reductions from BMPs at a landscape scale.

94. Canada and Ontario, in partnership with others, will investigate current (baseline) and future adoption of BMPs within the Lake Erie basin and selected subwatersheds to inform monitoring efforts and action plan progress.
95. Ontario will investigate the social, economic and environmental determinants affecting BMP adoption.
96. Ontario will support studies that improve understanding of the correlation between phosphorus load reduction and high uptake of low impact development/green infrastructure.
97. Canada and Ontario will work with partners to measure the effectiveness of wetlands and other natural heritage features in reducing phosphorus through overland flow into watercourses.
98. Canada and Ontario will evaluate the feasibility of using economic instruments to achieve phosphorus reductions.
99. Canada and Ontario will work with partners to explore opportunities to adopt innovative technologies that encourage phosphorus recovery and reuse.
100. Conservation authorities will continue to leverage their expertise and initiatives at the watershed, subwatershed and local levels to research, innovate and evaluate technologies for improved agricultural BMPs, low impact developments and natural green infrastructure. This is an addition to research that aims to understand the social, economic and environmental determinants affecting BMP adoption.

Educate and Build Awareness

Enhance communication and outreach to build awareness, improve understanding and influence change

101. Canada and Ontario will develop a digital marketing campaign that includes social media to build awareness of the need for actions to reduce phosphorus in the Lake Erie basin.
102. Canada and Ontario, in partnership with others, will support the development and implementation of tools, techniques and programming to enhance communication, education and awareness of the phosphorus issue in the Lake Erie watershed, and the practices available for effective management.
103. Ontario will continue to work with partners to connect teachers, students and school boards with opportunities to use Lake Erie and the watersheds as a context for teaching and learning.
104. Ontario will work with the agriculture sector and partners to communicate best practices through educational materials, events, technology demonstrations, peer-to-peer learning opportunities and demonstration farms that foster the adoption of BMPs (such as responsible nutrient management including soil testing, crop rotation, erosion control structures, and natural and built green infrastructure) and lead to a reduction of phosphorus loss to the environment.
105. Ontario, in partnership with the agriculture industry will continue to develop and deliver information and tools to increase cover crop use in the non-growing season to improve soil health and reduce field runoff.
106. Ontario's livestock and poultry sector will lead the establishment of a peer-to-peer advisory committee to provide education and awareness to producers about the risks of nutrient application on frozen or snow covered ground with the goal being to effect behavioural change and reduce risk of nutrient loss to the environment.

107. Ontario will, by 2018, deliver enhanced drainage and erosion control education and training to increase awareness of causes of nutrient loading in runoff and how to manage drainage to reduce phosphorus.
108. Land Improvement Contractors of Ontario will continue to focus on proper drain installation to minimize phosphorus movement to the watercourse through its annual convention, newsletter articles and continuous training of those involved in drain installation to ensure phosphorus movement impacts remain a high priority.
109. Conservation authorities will continue to communicate best practices and engage Lake Erie residents through the delivery of school-based programs, conferences, workshops and tours, development of media posts and publications, and face-to-face interactions.
110. Ontario, through the *Premier's Award for Agri-Food Innovation Excellence*, will continue to encourage the recognition of excellence, innovation and leadership in demonstrating environmental action at the farm level in the Lake Erie basin.

Share data and information

111. Canada and Ontario, along with their partners, will make relevant long-term data and information on Lake Erie public as it becomes available.
112. Ontario will report on Lake Erie every three years under the *great Lakes Protection Act, 2015* and work with its partners to provide an annual update through its website.
113. Ontario will encourage partners to make relevant information on Lake Erie accessible through various online platforms.
114. Conservation Ontario will continue to undertake a partnership with the Great Lakes Observing System to help enable conservation authorities to make their data discoverable and accessible.
115. Conservation authorities will continue to develop, maintain and share data management systems and services for use in various aspects of hydrologic, water budget and water quality analyses, groundwater monitoring and climate change and other watershed studies.

Strengthen Leadership and Co-ordination

Improve communication and co-ordination

116. Canada and Ontario will continue to engage Indigenous communities to facilitate their participation and input in the development and implementation of this action plan. This will include consideration of traditional ecological knowledge from First Nations and Metis if offered. Youth engagement will be encouraged in particular.
117. Canada and Ontario will continue to engage youth to seek their participation and input on the implementation of the action plan.
118. Canada and Ontario will update the Great Lakes community on the progress of implementing the action plan through webinars forums, meetings and other opportunities.
119. Canada and Ontario will work with partners to co-ordinate research, monitoring and modelling activities to improve scientific efforts towards phosphorus reduction.
120. Canada, with Ontario's support, will co-ordinate with the United States the implementation of nutrient-related commitments under the GLWQA.

121. Conservation authorities will continue to provide local watershed-level leadership in partnership with Canada, Ontario, municipalities and all stakeholders to address the phosphorus challenge in Lake Erie.

Establish an adaptive management framework and governance structure for implementation

122. Canada and Ontario will build on existing governance structures to ensure partner participation in the implementation of the action plan. Parties identified in the plan will work together to develop a workplan by February 2019 that establishes timelines for actions and expected phosphorus reductions (as applicable), identifies lead agencies and determines the investment required.
123. Canada and Ontario will assess and report on progress toward achieving phosphorus reduction targets and actions in 2023 and every five years thereafter.
124. Canada and Ontario will establish metrics to support a suite of performance measures to track the impacts of actions over time, including changes to phosphorus loadings. Actions will be adjusted as necessary based on an adaptive management framework.
125. Canada and Ontario will work with the U.S. federal and state agencies and other partners (e.g., through the GLWQA “Nutrients Annex” and the Great Lakes Commission’s *Blue Accounting ErieStat* pilot project) to develop a binational information platform to track progress toward meeting the phosphorus reduction targets.

WECEC COORDINATOR MONTHLY REPORT

– APRIL 2018 –



ONGOING INITIATIVES

1. Updates

A. Earth Day 2018

Earth Day in Windsor Essex has at least two major events:

1. Earth Day is on April 22, 2018 and is an exciting day to celebrate the Earth and to learn how to properly care for it. The theme for Earth Day this year is plastics. The City of Windsor is coordinating their annual Earth Day event in Malden Park. WECEC is invited to set up a booth to discuss the environment with Windsor and Essex County residents.
2. ERCA and the Detroit River Canadian Clean up have teamed up to celebrate Earth Day. They are inviting people to join them to help plant more than 2,000 native trees and shrubs in the City of Windsor.



B. Earth Hour 2018

Earth Hour is a grassroots environmental event that started in Sydney, Australia. The City of Windsor partnered with EnWin and Caesars Windsor to invite people of Windsor Essex County to come and learn about climate change and pro-environmental actions they can take on Saturday, March 24 from 8:30pm to 9:30pm. Even though this year's Earth Hour was quite cold, we had the City Cyclery there with bikes to help warm people, kept people interested with Mad Science talking about water preservation, the University's School of Creative Arts helped run an art booth, all to the music provided by Stiletto Fire. To warm people up, we enjoyed SueSanity Pound Fitness which had people moving in the dark. This was the second year for this event.

C. Dearborn Industrial generation L.L.C. Permit Application

The pollution requests made to the Michigan Department of Environmental Quality from CMS Energy have been pulled. The project has been pulled as a result of public protest over the amount of pollution that would impact Dearborn and surrounding communities. The citizens of Dearborn are pleased with the result.

D. Pat on the Back Awards

If WECEC wishes to continue with the annual Pat on the Back awards, a motion should be made to do so at the March meeting. The Awards are generally advertised in late April and the event takes place the last week of May. There are generally 4 WECEC members involved with this initiative.

E. Updates to WECEC Priorities

As a result of the January 2018 meeting, one new item was added which is exploring the ban of plastic bags. The priorities have become ambitious and lengthy and have therefore been sorted into themes to help steer WECEC towards achievement.

F. Potential Green Speakers

Priority	Speaker	Background
Awareness of local climate change impacts and threats	Rob Shirkey , Executive Director, Our Horizon	Rob, a lawyer from Toronto, is a recognized global authority on the subject of climate change warnings on gas pump nozzles. He has given lectures on the topic across North America and has been featured in media all over the world. Over 50 communities in Canada have voted in favour of the concept and several U.S. cities are now pursuing the idea too. He also has experience as an Assistant City Solicitor and Prosecutor. Rob's talks draw on the latest in climate change research. He gathers insights from psychology, sociology, economics, business, and law to build the case for demand-side, local action on climate change. His trial experience as a lawyer and his playful sense of humour makes him a compelling and entertaining speaker.
Tree Cutting By-Law	Paul Giroux Forester, City of Windsor	Can relate to "invasive species"
	Rob Davies Forester, ERCA	
Pollution issues	Dr. Kate Parizeau Assistant Professor Department of Geography, University of Guelph	Dr. Parizeau is interested in research questions concerning the social context of waste and its management. Having grown up with a landfill in her backyard, Kate believes a society's waste can reveal how various environmental and social concerns are prioritized. Garbage can also provide insight to the politicization and governance of everyday life
	Dr. John Howard CAPE Board Past President Professor at the Schulich Faculty of Medicine and Dentistry at Western University	Dr. Howard is a recognized speaker on health policy, medical education and institutional change – in particular, as these topics relate to the environment.
Invasive species awareness/control	Paul Giroux Forester, City of Windsor	Can relate to Oak Wilt and other threats to trees and relate to the "tree cutting by-law"
	Rob Davies Forester, ERCA	
	Wings Wildlife Rehabilitation OR Erie Wildlife Rescue	Speak to wildlife threats, climate change, pollution, human action, invasive species
Banning of Plastic Bags	Dr. Jill Crossman University of Windsor Professor	Dr. Crossman looks at the impacts of microplastics in the environment

G. WECEC City and County Approvals

The City of Windsor has recently announced it is seeking federal protection for Ojibway Shores. This has been an ongoing debate and has recently involved WECEC starting a motion. The timeline is as follows:

- October 26, 2017
 - WECEC motions Report No. 100 to have the City of Windsor seek federal conservation of Ojibway shores.
- December 20, 2017
 - Environment, Transportation and Public Safety Standing Committee for the City of Windsor approves the report to move to Council.
- January 29, 2018
 - Windsor City Council unanimously adopts the Report to seek federal conservation of Ojibway Shores.

When applicable, the Essex County Council receives the WECEC meeting minutes. Reports from WECEC are often also sent to the County Council. For example, Report No. 96 concerned both Windsor and County Councils.

- June 8, 2017
 - WECEC Motions Report No. 96 regarding the Government of Ontario's Nuclear Response Plan.
- June 28, 2017
 - Environment, Transportation and Public Safety Standing Committee for the City of Windsor approves the report to move to both City of Windsor and Essex County Councils.
- July 19, 2017
 - Report No. 96 is approved by City of Windsor Council.
- July 27, 2017
 - Report No. 96 is approved by the Essex County Council.

H. Matchette Road and Eco Passages

The City of Windsor has allocated \$25,000 to conduct an analysis and report on the recommendation of Eco Passages to connect Ojibway Park to the Ojibway Prairie Reserve.

2. Reports to Council

No reports to Council.

WECEC BUDGET – SUMMARY

2018 Budget			
Item	Credit	Estimated Expenditure	Status
2018 Budget	\$8,000.00		
Pat on the Back		\$2500.00	
Green Speaker #1		\$1000.00	
Green Speaker #2		\$1000.00	
Movie Screening		\$2000.00	
Website Hosting and Domain Fee		\$450.00	
Earth Day		\$35.00	
TOTALS	\$8,000	\$6,985.00	
NON-ALLOCATED REMAINING		\$1015.00	

WECEC COORDINATOR MONTHLY REPORT

– APRIL 2018 –



WECEC Work Plan 2018

Strategic Direction #1 – WECEC Collaborations		
GOALS	ACTIONS	TIME FRAME
Goal: Improve relationships with City and County Councils.	Prepare an annual report of accomplishments and send to City and County Councils, environmental organizations, boards etc.	Yearly
	Continue to have WECEC events in different areas of Essex County	Ongoing
Goal: Improve relationships with other organizations, committees.	Hold a meeting with other environmental organizations and committees to share information	Yearly
	Continue to pursue opportunities for partnering on community education/public awareness	Ongoing
	Hold annual Pat on the Back Awards presenting \$2,000 to local environmental organizations and schools.	Yearly
Strategic Direction #2 – Advocacy		
GOALS	ACTIONS	TIME FRAME
Goal: Provide advice on environmental issues to the City of Windsor, County of Essex and its area municipalities.	Assess issues referred from City and County Councils and respond with suggested recommendations	Ongoing
	Provide recommendations to City and County Councils on environmental matters identified through our own initiative.	Ongoing
Goal: Advocate for environmental groups in Windsor Essex County.	Accept delegations from environmental groups and advocate on behalf of these groups to City and County Councils.	Ongoing
Goal: Provide advice to City and County Council related to Federal and Provincial initiatives.	Develop recommendations related to Federal and Provincial plans, policies and initiatives to be forwarded to City and County Councils.	Ongoing
Strategic Direction #3 – Public Engagement and Education		
GOALS	ACTIONS	TIME FRAME
Goal: Increase awareness of WECEC by the public.	Maintain a website and Facebook page.	Monthly
	Strategically identify and attend community events	Ongoing
	Maintain a professional display for participation at community events	Ongoing
Goal: Increase engagement of public on environmental issues	Develop environmental education campaigns and messaging to help inform Windsor Essex County residents about environmental issues	Ongoing
	Host free knowledge sharing events with environmental experts highlighting environmental issues.	Ongoing

Climate Change Action Plan Helping Families and Businesses Save Money While Lowering Emissions

Ontario Releases First Climate Change Action Plan Progress Report

March 14, 2018 10:05 A.M.

Premier Kathleen Wynne, along with Minister of the Environment and Climate Change Chris Ballard, today shared the first progress report on Ontario's Climate Change Action Plan (CCAP). The action plan is a five-year strategy that is making life more affordable for people across Ontario, giving businesses more choice in reducing pollution and making Ontario a leader in the global fight against climate change.

The Premier visited the Fazio family in Toronto to hear about how they are lowering their energy bills and making their home more energy efficient.

Thanks to support from CCAP's Green Ontario Fund (GreenON), families across Ontario are now saving money on energy costs while also helping to reduce their greenhouse gas emissions. GreenON is making life more affordable for homeowners and their families by providing rebates when they upgrade their homes with:

- Up to \$7,200 in savings on new insulation
- Up to \$5,000 in savings on replacement windows
- Up to \$5,800 in savings on some air source heat pumps
- Up to \$20,000 in savings on installation of some certified ground source heat pumps.

Ontario's CCAP is also helping researchers, entrepreneurs and companies fuel innovations that will reduce greenhouse gas pollution through the Low Carbon Innovation Fund.

The action plan is funded through proceeds from Ontario's cap on the pollution businesses can emit and carbon market. The approximately \$2.3 billion generated through five auctions has already enabled significant investments in homes, hospitals, schools, colleges and universities, and municipal buildings across the province, while helping to reduce greenhouse gas pollution.

CCAP has helped industry and manufacturers transform operations, move off imported fossil fuels and peak-period electricity, and helped create more jobs in clean tech and skilled trades.

Lowering greenhouse gas pollution and reinvesting in communities is part of Ontario's plan to create fairness and opportunity during this period of rapid economic change. The plan includes a higher minimum wage and better working conditions, free tuition for hundreds of thousands of students, easier access to affordable child care, and free prescription drugs for everyone under 25 through the biggest expansion of medicare in a generation.

QUOTES

" No matter where we live, we have all witnessed the impact of climate change on our environment, our cities and our day-to-day lives. We have a responsibility to tackle the immediate threat. We also have an opportunity to lead. All the proceeds from Ontario's carbon market — every dollar — is being cycled into programs and initiatives that help families and businesses lower their energy bills and fight climate change. Our Climate Change Action Plan is actively building a cleaner, low-carbon Ontario, while also helping families and businesses save money."

- Kathleen Wynne
Premier of Ontario

" There isn't a single person in Ontario, our country or the world who isn't affected by climate change. That's why Ontario's Climate Change Action Plan focuses on transforming how all of us live, move and work — and we are making major progress. We are capping the greenhouse gas pollution businesses can emit and investing the proceeds from our carbon market into projects that reduce harmful emissions and make life better for people across Ontario."

- Chris Ballard
Minister of the Environment and Climate Change

QUICK FACTS

- The Climate Change Action Plan and carbon market form the backbone of Ontario's strategy to cut greenhouse gas pollution to 15 per cent below 1990 levels by 2020, 37 per cent by 2030 and 80 per cent by 2050.
- As of January 1, 2018, Ontario became part of the largest carbon market in North America — a linked marketplace with Québec and California that provides more choice for companies seeking to reduce emissions, at a lower cost.
- To date, Ontario's carbon market has generated approximately \$2.3 billion. The government is investing every penny into projects that prevent, reduce or support the reduction of greenhouse gas emissions.
- A comprehensive Greenhouse Gas Reduction Account Annual Report will be released in 2018, and will include a financial report for allocation and spending of carbon market proceeds.

- Ontario has invested \$377 million in proceeds from its carbon market to establish the Green Ontario Fund.

LEARN MORE

- [Minister's Climate Change Action Plan Progress Report 2017](#)
- [Ontario's five-year Climate Change Action Plan](#)
- [The Green Ontario Fund](#)
- [Cap and Trade](#)
- [Low Carbon Innovation Fund](#)

Available Online
Disponible en Français



SEWER MASTER PLAN

The City of Windsor is initiating a Sewer Master Plan to confirm the risk of flooding across Windsor and look at ways to make the city more resilient.

Your participation in the Sewer Master Plan process will improve the results and help us create a plan that we can implement together. Consultation is an integral part of this process and members of the public, agencies, Indigenous communities and other interested persons are encouraged to participate in the master planning process:

- ▶ Find out more about the project and tell us your flooding story by visiting the project web site: weatheringthestorm.ca
- ▶ Come talk to us at the *weathering the storm* booth at the **Earth Day 2018 event on April 22nd at Malden Park**
- ▶ Sign up to the project contact list for future information through our website or by contacting one of our team members on the back of this notice
- ▶ Apply by April 13, 2018 to be a member of the project Stakeholder Advisory Committee (*application on the project website or contact team representatives on back of this notice*)

Over the past few years, thousands of Windsor residents were impacted by flooding both in and around their homes. In early fall 2017, the Mayor released an 8-Point Plan aimed to assist the Windsor community to address flooding issues. A key element of the plan is completing the City's Sewer Master Plan. The Master Plan will confirm the areas that are vulnerable to flooding, identify reasons for the flooding, generate and evaluate short and long-term alternative solutions, and develop a long-range implementation strategy to manage flooding in the City.

Public Information Centres (PIC) will also be held to present information and obtain your input. The first PIC is anticipated for spring 2018.

9.1.1

NOTICE OF COMMENCEMENT

This study will be carried out over a 24 month period and will be conducted in accordance with the Master Plan Approach No. 2 of the Municipal Class Environmental Assessment (EA) (Municipal Engineers Association, 2015) process. Work will fulfill EA requirements for Schedule B projects and complete Phases 1 and 2 of the process for Schedule C projects.

All comments and information received from individuals, stakeholder groups and agencies regarding this study are being collected to assist the City of Windsor in completing the Sewer Master Plan. Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act and with the exception of personal information, all information provided will become part of the public record. This notice is also available on the City's website at: <https://www.citywindsor.ca/residents/Construction/Environmental-Assessments-Master-Plans>, under 'Environmental Assessment Studies and Master Plans'.

If you are interested in being placed on the project contact list to receive future information, or if you have any questions, please contact either of the project representatives:

Flavio Forest, P.Eng.

Project Manager

3200 Deziel Drive, Suite 608

Windsor, ON, N8W 5K8

519.948.4243 ext. 3233

info@weatheringthestorm.ca

Anna M. Godo, P. Eng.

Senior Engineer, City of Windsor

350 City Hall Square West, 3rd Floor

Windsor, Ontario, N9A 6S1

519.255.6100 ext. 6508

info@weatheringthestorm.ca





SEWER MASTER PLAN

Consultation is an integral part of this process and members of the public, agencies, Indigenous communities and other interested persons are encouraged to participate in the master planning process. The purpose of the Stakeholder Advisory Committee is to provide advice and feedback to the City of Windsor Sewer Master Plan project team at key milestones. Members will be asked to participate in ten meetings held on weekday evenings approximately every other month. This represents a time commitment of approximately 25-30 hours over the 2 year project. A date for the first meeting has not been set at this time but is anticipated to be in early May 2018.

If you would like to be a member of the Stakeholder Advisory Committee, please complete this application form, and email it to info@weatheringthestorm.ca before April 13, 2018. Please use the subject line "Stakeholder Advisory Committee Application" in your email.

Name:

Mailing Address:

Email Address:

Telephone #:

Have you experienced flooding?

☐

Yes

☐

No

Are you currently a member of any city committee or board, or community group?

☐

Yes

☐

No

If yes, which ones?

Please list the skills or qualifications you would bring to this committee.

Please list your reason(s) for seeking membership on this committee and other pertinent information you may deem helpful in considering your application

Clear Form

Print Form



TOWN OF LAKESHORE

419 Notre Dame St.
Belle River, ON N0R 1A0

CITY OF WINDSOR
COUNCIL SERVICES

FEB 20 2018

RECEIVED

Windsor Essex County Environment Committee
Karen Kadour, Committee Coordinator
350 City Hall Square West, Windsor, ON

Dear Ms. Kadour,

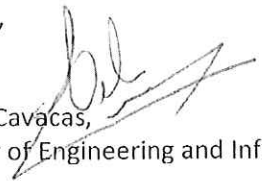
RE: Environmental Initiatives completed by the Town of Lakeshore – 2017

As requested, please see the list below of projects that began in 2017 that are related to improvements of the environment. As indicated, some of these initiatives have been completed and some are on-going with an estimated completion date of 2018.

1. Replacement of standard lighting to LED lighting at the Lakeshore Water Treatment Plant - reduction of electric hydro usage; reduction of carbon footprint (completed)
2. Replacement of single speed electric drives to variable frequency drives on all of the high lift pumps at the Lakeshore Water Treatment Plant – reduction of electric hydro usage; reduction of carbon footprint (completed)
3. Replacement of standard lighting to LED lighting at the Stoney Point Water Treatment Plant - reduction of electric hydro usage; reduction of carbon footprint (on-going)
4. Optimization Study at the Denis St. Pierre Water Pollution Control Plant to enhance operations – reduction in chemical usage; reduction in electric hydro usage; enhancement of effluent quality (on-going)
5. Detailed design of a mechanical water pollution control plant to replace the existing lagoon system within the Community of Stoney Point – enhancement of effluent quality (on-going)
6. Development of an enhanced inflow and infiltration program and sanitary collection system investigation program with an anticipated outcome of decreased by-pass events at the Denis St. Pierre Water Pollution Control Plant – enhancement of effluent quality (on-going)

The Town of Lakeshore has committed significant monetary as well as human resources to these projects in 2017 and 2018, demonstrating their commitment to the betterment of the environment.

Regards,


Nelson Cavacas,
Director of Engineering and Infrastructure Services

Leamington Environmental Initiatives for 2017/2018

Sewage and Sanitation

- 1.) Pelee Drive Sanitary Sewer Project: Extend sanitary servicing from the urban area of Leamington to Point Pelee National Park, approx. 6.7km. This will replace aging septic systems of 237 existing residents and businesses . Completion to occur in 2018.
- 2.) Marlborough/Chestnut/Fox sewer separation. Separate combined sanitary and storm into dedicated sewers, eliminating combined sewer overflows.
- 3.) North East Trunk Sewer Environmental Assessment for sanitary sewer collection approximately 15km into the Northern area of Leamington.
- 4.) Erie Street South Sewer separation
- 5.) Parkdale sewer separation
- 6.) Danforth sewer separation
- 7.) Mill St Sewer separation
- 8.) Servicing Capacity Study: Seaclyff Drive West Trunk Sanitary Sewer. Studying to extend sanitary servicing 3.5 km westerly to service near shore residential and commercial.
- 9.) Greenhouse water effluent study, for treatment at pollution control plant.

Active Transportation

- 1.) Update pedestrian crossings, addition of bike lanes on existing roads, and other active transportation improvements.
- 2.) New sidewalk on Oak Street, Install approx. 850 meters of sidewalk from Nicholas to Fraser Road, a section that was void of sidewalk on either side of the road.
- 3.) Multi-Use paths along Seaclyff Drive,. Install a 1.5m multiuse path on both sides of Seaclyff Drive from the urban area of Leamington to County Rd 31, approximately 3km.
- 4.) New sidewalks where none exists currently, various locations.
- 5.) Active transportation functional design assignments: Pelee Drive, Talbot St and Erie St. Preliminary design for active transportation infrastructure from the urban area of Leamington to Point Pelee National Park. Design of active transportation infrastructure on Talbot St. and parts of Erie St.

Energy Management:

- 1) Continue LED streetlight replacement. All 1,800 standard streetlights converted to LED in 2015, continue with replacing decorative streetlights.
- 2) Pollution Control Plant, energy demand study.

Parks:

- 1) New neighbourhood Park, Rickway Park
- 2) Expansion of Chestnut Park

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Council unanimously seeks federal protection for Ojibway Shores

"It's a piece worth fighting for," says Windsor Mayor Drew Dilkens



BRIAN CROSS

Published on: January 29, 2018 | Last Updated: January 29, 2018 9:34 PM EST



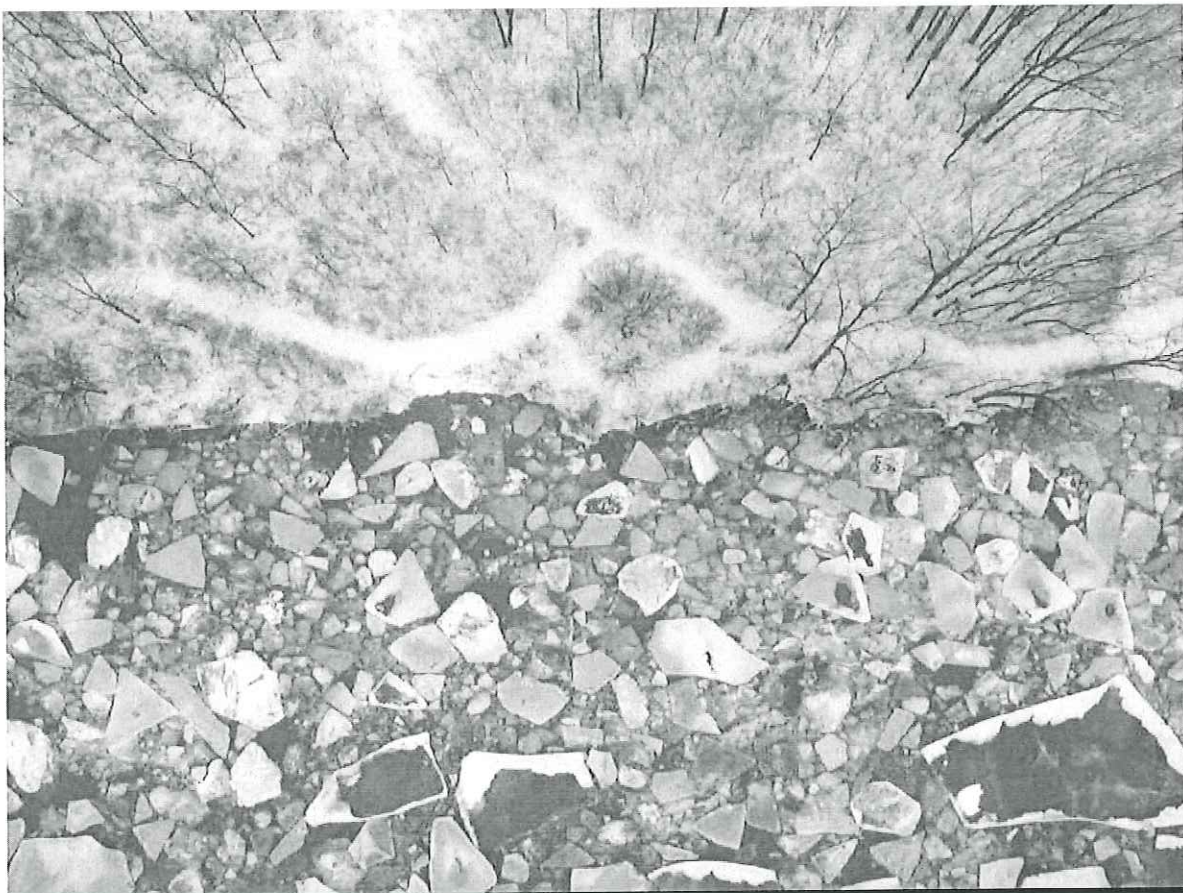
An aerial view of Ojibway Shores is shown Monday, Jan. 29, 2018. *DAX MELMER / WINDSOR STAR*

Unanimously, city council jumped aboard the long-standing fight to keep Ojibway Shores a natural forest on Monday, calling on the federal government to declare it an environmentally protected area.

"I'm a big champion of this, I really see the value of preserving this in its natural state," Mayor Drew Dilkens said after spokesmen for local environmental groups implored council to help save the 33-acre riverfront "gem," which they regard as the most biologically important property in the region.

Dilkens described it as the "missing link of the Ojibway complex," the 680-acre collection of forest, prairie and wetlands in the city's west end.

Ojibway Shores is controlled by the Windsor Port Authority which five years ago made noises about clear-cutting its forest to make way for possible development and infilling it with rubble from the nearby Herb Gray Parkway project. That plan was met with howls of outrage from citizens upset about the loss of the last natural forest on the Windsor side of the Detroit River shoreline, which links the Ojibway complex to the water.



An aerial view of Ojibway Shores is shown Monday, Jan. 29, 2018. DAX MELMER / WINDSOR STAR

The mayor said he agrees with the environmental groups, which have been fighting to preserve the property for many years. "It's a piece worth fighting for," he said.

Tom Henderson, chairman of the Detroit River Canadian Cleanup's Public Advisory Council, said that in recent years the Port Authority has been "fantastic" preserving the area. Last year, it chased out mountain bikers who had severely damaged the natural area and set about repairing it. But as long as it's in the Port Authority's hands, a question mark remains, Henderson said. He noted that the authority's website still lists the land as available for development.

"They've done everything, except guarantee it's survival in perpetuity," he said, describing the area as more biologically significantly and diverse than the entire Ojibway complex.

"It's a gem that's unlike anywhere else in Canada. We have to keep it."



Tom Henderson, chair of the public advisory council at the Detroit River Canadian Cleanup, speaks on the issue of Ojibway Shores at City Council, Monday, January 29, 2018. DAX MELMER / WINDSOR STAR

While it's been in the port authority's hands since a land swap with the city 25 years ago, the authority is a federal agency and MP Brian Masse (NDP–Windsor West) has been arguing it is taxpayer-owned federal land that should simply be taken over and preserved by either the city or Environment Canada. The port authority, however, has talked about financial compensation as high as \$10 million.

The city, meanwhile, has \$1.5 million set aside in case it needs to buy the land. Dilkens said the city and port authority have met numerous times to discuss the issue, and are meeting again in three weeks.



Derek Coronado, coordinator at the Citizens Environment Alliance of Southwestern Ontario, speaks on the issue of Ojibway Shores at City Council, Monday, January 29, 2018. DAX MELMER / WINDSOR STAR

"On the face of it, it looks like a really simple thing: Write them a cheque, they give you the land." But it's been much more complicated, Dilkens said. The mayor said he has spoken to federal Transportation Minister Marc Garneau at least four times on the matter. Monday's motion, he said, is probably more of a symbolic gesture, because there is movement towards preserving Ojibway Shores, either as a city, provincial or federal natural area.

"At the end of the day, public ownership, preserving it for perpetuity, that's all any of us want."

Derek Coronado, co-ordinator of the Citizens Environment Alliance, told councillors that without proper protection, the fear is the port authority "will continue to push for development and eventually get away with it."



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



C. HEIDI GRETHUR
DIRECTOR

March 22, 2018

Dear Interested Party:

Thank you for your interest regarding the Permit to Install application submitted by the Ford Motor Company Flat Rock Assembly Plant, to the Michigan Department of Environmental Quality (MDEQ), requesting the installation of a new electronic data center with backup generators. The Flat Rock Assembly Plant is located at 1 International Drive, Flat Rock, Michigan

Pursuant to state and federal requirements, the MDEQ held a public comment period that ended on March 9, 2018. A public hearing was not requested, and there were no comments submitted during the public comment period.

After careful consideration of the issues and pursuant to the delegation of authority from the Director of the MDEQ, I have approved Permit to Install No. 122-17.

If you have any questions regarding this permit, please contact Mr. John Vial, Air Quality Division, Permit Section at 517-284-6805: VialJ@michigan.gov; or MDEQ, P.O. Box 30260, Lansing, Michigan 48909-7760; or you may contact me.

Sincerely,

Mary Ann Dolehanty, Acting Director
Air Quality Division
517-284-6773

cc: Mayor Jonathan Dropiewski, City of Flat Rock
Mayor Drew Dilkens, City of Windsor
Ms. Madeleine Godwin, Ontario Ministry of the Environment, Windsor
Mr. Mike Moroney, Ministry of the Environment, Sarnia/Windsor District
Mr. Mark Smith, Ministry of the Environment, Windsor Area Office
Ms. Karen Clark, Ministry of the Environment, Air Policy and Climate Change
Branch
Mr. Chris Manzon, Pollution Control Services, City of Windsor
Mr. Mark J. Burrows, International Joint Commission
Ms. Averil Parent, City of Windsor
Congresswoman Debbie Dingell, Congressional District 12
Senator Coleman Young II, District 1
Senator Hoon-Yung Hopgood, District 6
Senator Dale Zorn, District 17
Representative Joseph Bellino, House District 17
Ms. Genevieve Damico, U.S. Environmental Protection Agency, Region 5
Mr. Constantine Blathras, U.S. Environmental Protection Agency, Region 5
Ms. Stephanie Diaz, U.S. Environmental Protection Agency, Region 5
Ms. Cathy Garrett, Wayne County Clerk
Ms. Ilona Varga, Wayne County Commissioner
Dr. Joneigh Khaldun, City of Detroit, Executive Director and Health Officer
Mr. Raymond Scott, City of Detroit, Buildings, Safety Engineering and
Environmental Department (BSEED)
Mr. Paul Max, City of Detroit, BSEED
Mr. Rob Streight, Permit Manager, Ford Motor Company
Mr. Chris Occhipinti, NTH Consultants, Ltd.
Ms. Tiffany Brown, Public Information Officer, MDEQ
Ms. Wilhemina McLemore, MDEQ
Mr. Jeffrey Korniski, MDEQ
Mr. Robert Byrnes, MDEQ
Mr. Jonathan Lamb, MDEQ

STATE OF MICHIGAN

Rick Snyder, Governor



DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

CONSTITUTION HALL • 525 WEST ALLEGAN STREET • P.O. BOX 30260 • LANSING, MICHIGAN 48909-7760
www.michigan.gov/air

PUBLIC PARTICIPATION DOCUMENTS

For
Carmeuse Lime & Stone
River Rouge, Michigan

PERMIT APPLICATION NUMBER

128-17

February 7, 2018

FACT SHEET

February 7, 2018

Purpose and Summary

The Michigan Department of Environmental Quality (MDEQ), Air Quality Division (AQD), is proposing to act on Permit to Install (PTI) application No. 128-17 for Carmeuse Lime & Stone (Carmeuse). The permit application is for the use of additional fuels in their existing lime manufacturing plant. Coal is the primary fuel burned in the plant. The proposed modification is to replace some coal with two additional fuels, used oil and to conduct a trial burn using processed biosolids. The proposed project is subject to permitting requirements of the MDEQ's Rules for Air Pollution Control. Prior to acting on this application, the AQD is holding a public comment period and a public hearing to allow all interested parties the opportunity to comment on the proposed PTI. All relevant information received during the comment period and hearing will be considered by the decision maker prior to taking final action on the application.

Background Information

The Carmeuse facility is located at 25 Marion Avenue, just east of Jefferson Avenue, in the City of River Rouge. The facility's property is bounded by Marion Avenue to the south; by the Rouge River to the north; by Jefferson Avenue and a City of River Rouge Department of Public Works building and yard to the west; and by the BP River Rouge Terminal (205 Marion Street) to the east.

Limestone (calcium carbonate) is the primary material used to produce lime. The limestone is brought to the Carmeuse facility via ship, and is stored in the northern half of the property adjacent to the Rouge River. The limestone comes from quarries in locations such as Manitoulin Island, Ontario; Rogers City, MI; and Gulliver, MI in the southern Upper Peninsula.

The lime (quicklime or calcium oxide [CaO]) is produced when the limestone is calcined via heating to over 1,600°F in two rotary lime kilns. The process basically separates off the carbon dioxide portion of the limestone. The kilns, which are 300 feet long, are fired primarily by coal with natural gas used at start up. Other fuels including glycerin and syngas are allowed to be burned in the kilns. The use of these fuels was first allowed under PTI No. 330-07D which was issued on February 17, 2012. Each kiln has a maximum production capacity of between 500 and 550 tons of lime product per day and a design heat input capacity of 178 million British thermal units per hour.

The quicklime that is produced at the facility is sent to various customers, including the steel industry (there are two steel mills within a few miles radius of the Carmeuse facility). It is also used for water treatment and air pollution control equipment such as, flue gas desulfurization units and lime injected baghouses.

The exhaust gases from the kilns are sent to two positive pressure, reverse-air baghouses, one for each kiln. Prior to venting to the baghouses, the exhaust air from the kilns is sent through a water spray to lower the exhaust air temperature to below 500°F. Each of the baghouses consists of 12 compartments that contain a high-temperature fabric filter. The primary purpose of the baghouse units is to control emissions of particulate matter, but due to the resultant coating of limestone-derived material on the fabric filters, the baghouse also provides some measure of control for other pollutants produced by the lime production process, namely sulfur dioxide (SO₂) and hydrogen chloride.

On March 18, 2016, the AQD approved PTI No. 193-14A for Carmeuse which is included as part of Michigan's 1-hour SO₂ nonattainment State Implementation Plan development. A requirement of that permit is that on or before October 1, 2018, Carmeuse will construct a new exhaust stack for the combined emissions from both kilns. This stack must be a minimum of 120 feet in height.

Proposed Facility and Present Air Quality

Carmeuse is proposing to burn two additional fuels, used oil and biosolids, in their existing lime kilns. The biosolids are processed dried organic matter which Carmeuse will obtain from the Great Lakes Water Authority. They have requested to burn the used oil on a permanent basis and the biosolids on a 90-day trial basis. Continued use of the biosolids beyond the 90-day trial basis would require a separate permit. That permit application would be evaluated on the results of the trial requested in this application.

These alternative fuels are intended to replace an equivalent amount of coal. No new production equipment is proposed to be installed. Also, Carmeuse is not planning to increase production as a result of the proposed changes nor requesting a change in their allowed emission limits.

The used oil fuel and the processed biosolids fuel both meet standards established by the United States Environmental Protection Agency (USEPA) to qualify as fuels, not wastes. Fuel is burned primarily to produce heat and/or energy. Waste is burned primarily for destruction by incineration. Different air pollution control regulations apply to fuel and to waste.

The facility is located in the portion of Wayne County which is currently meeting all of the National Ambient Air Quality Standards (NAAQS) set by the USEPA, except for SO₂. The other air quality standards are for particulate matter equal to or less than 10 microns in diameter (PM₁₀), particulate matter equal to or less than 2.5 microns in diameter (PM_{2.5}), ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), and lead. All of the standards are set at levels designed to protect the public health. It is anticipated that the USEPA will designate Wayne County as non-attainment for ozone in the Spring of 2018.

Pollutant Emissions

As the project involves the modification of two existing emission units (the two kilns), Michigan Air Pollution Control Rule R336.2802(4)(c) allows an applicant to provide a demonstration they are not subject to Prevention of Significant Deterioration (PSD) if it can be shown that the actual to the projected actual (A2A) emissions change is less than significant. Likewise, Michigan Air Pollution Control Rule R336.2902(2)(c) offers the option to allow an applicant to provide a demonstration they are not subject to Nonattainment New Source Review (NNSR) if it can be shown that the A2A emissions change is less than significant. As the following Tables show, Carmeuse was able to make such demonstrations.

Table A – Project Emissions Summary PSD Applicability Determination

Pollutant	Maximum Projected Emissions*	Baseline Emissions	Excludable Emissions	Projected PSD Emissions Change**	PSD Significant Threshold	Project Subject to PSD for this Pollutant
CO	138.5	84.3	13.0	41.2	100	No
Oxides of Nitrogen (NOx)	757.7	650.7	100.1	6.8	40	No
Particulate Matter (PM)	54.2	40.2	16.7	-2.7	25	No
PM10	54.2	40.2	16.7	-2.7	15	No
PM2.5	54.2	40.2	16.7	-2.7	10	No
Volatile Organic Compounds (VOC)	13.9	3.24	0.50	10.1	40	No
Lead	2.7E-02	3.8E-04	5.8E-05	2.7E-02	0.6	No

*Maximum Projected Emissions are based on a production level of 350,558 tons of lime per year and the highest emission rate for all of the fuel blends evaluated.

**Projected PSD Emissions change is the Maximum Projected Emissions minus Baseline Emissions minus Excludable Emissions.

Table B – Project Emissions Summary NNSR Applicability Determination

Pollutant	Maximum Projected Emissions*	Baseline Emissions	Excludable Emissions	Projected NNSR Emissions Change**	NNSR Significant Threshold	Project Subject to NNSR for this Pollutant
SO ₂	655.2	772.3	119.3	-236.4	40	No

*Maximum Projected Emissions are based on a production level of 350,558 tons of lime per year and the highest emission rate for all of the fuel blends evaluated.

**Projected NNSR Emissions change is the Maximum Projected Emissions minus Baseline Emissions minus Excludable Emissions.

Key Permit Review Issues

Staff evaluated the proposed project to identify all state rules and federal regulations which are, or may be, applicable. The tables in Appendix 1 summarize these rules and regulations.

- **Prevention of Significant Deterioration (PSD) Regulations** – The Carmeuse facility is an existing major stationary source under the PSD regulations. Using an A2A applicability analysis under Michigan Air Pollution Control Rule R336.2801(II), Carmeuse was able to demonstrate that their proposed project to burn additional fuels is not subject to PSD. This is shown in Table A above.
- **Minor/Major Modification Determination for Attainment Pollutants** – The facility is an existing PSD major stationary source. A modification at the facility where the emissions of any regulated pollutant will increase by more than the significant level for that pollutant results in the modification being subject to PSD requirements for that pollutant. The proposed project is not subject to PSD because the emission increase for each regulated pollutant is less than the significant level for that pollutant. This is shown in Table A above.

- **Minor/Major Modification Determination for Nonattainment Pollutants** – The facility is located in the portion of Wayne County which is currently nonattainment for SO₂ and is an existing major offset source for SO₂. An increase in SO₂ emissions above the significant level will result in the change being subject to major NNSR. The significant level for SO₂ is 40 tons per year. The proposed change in SO₂ emission from the facility is a decrease of 236.4 tons per year which is an increase from the facility of less than significant. Therefore, the proposed change in SO₂ emissions is not subject to major NNSR. This is shown in Table B above.
- **Federal NSPS Regulations** – New Source Performance Standards (NSPS) were established under Title 40 of the Code of Federal Regulations (40 CFR) Part 60. The facility is subject to the NSPS for Coal Preparation and Processing Plants, 40 CFR Part 60 Subpart Y. No new NSPS requirements are applicable as a result of the facility burning used oil or processed biosolids.

As the used oil and the processed biosolids are categorized as fuels and not as waste materials, the kilns will not be subject to the NSPS for Commercial and Industrial Solid Waste Incinerators, 40 CFR Part 60 Subpart CCCC.

- **Federal NESHAP Regulations** - National Emission Standards for Hazardous Air Pollutants (NESHAP) were established under 40 CFR Part 61 or Part 63. The facility is subject to the NESHAP for Lime Manufacturing Plants, 40 CFR Part 63 Subpart AAAAA. No new NESHAP requirements are applicable as a result of the facility burning used oil or processed biosolids.
- **Rule 224 TBACT Analysis** – Michigan Air Pollution Control Rule R 336.1224 requires best available control technology for toxics (TBACT). However, the requirements of Rule 224 do not apply to any process subject to a federal NESHAP. As the Carmeuse facility is subject to NESHAP Subpart AAAAA, TBACT is not applicable.
- **Rule 225 Toxics Analysis** – The MDEQ Rules for Air Pollution Control require the ambient air concentration of toxic air contaminants (TACs) be compared against health-based screening levels. The AQD staff reviewed Carmeuse's air quality modeling and evaluation of TAC impacts. The review found that all TACs show impacts less than 30 percent of the established health-based screening levels and will comply with the requirements of Rule 225. The analysis evaluated both of the proposed new fuels being emitted from Carmeuse's current exhaust points and the new 120 foot tall stack which will be in place by October 1, 2018.
- **Rule 702 VOC Emissions** – This rule requires an evaluation of the following four items to determine what will result in the lowest maximum allowable emission rate of VOCs:
 - a. BACT or a limit listed by the department on its own initiative
 - b. New Source Performance Standards (NSPS)
 - c. VOC emission rate specified in another permit
 - d. VOC emission rate specified in the Part 6 rules for existing sources

Work practice standards ensuring the efficient combustion of fuels was determined to be BACT under meet the Rule 702(a).

- **Criteria Pollutants Modeling Analysis** - Computer dispersion modeling was performed to predict the impacts of air emissions from CO and NO₂. Each pollutant had modeled ambient air impacts that were less than their respective significant impact levels (SILs). The SILs, which are much lower than the NAAQS, are used as an initial screening tool: modeled impacts that are less than the SIL are not expected to cause a violation of the NAAQS or to exceed the allowable PSD increments. If a SIL is exceeded, then further assessment is appropriate. The analysis evaluated both of the new proposed new fuels being emitted from Carmeuse's current exhaust points and the new 120 foot tall stack which will be in place by October 1, 2018.

The following tables show the result of the SIL modeling for this proposed project.

Table C - Preliminary Modeling Impacts Current Exhaust Points

Pollutant	Averaging Time	NAAQS (µg/m ³)	SIL (µg/m ³)	Highest Predicted Impact (µg/m ³)	Greater than SIL / Additional Modeling Required?
CO	8-hr	10,000	500	37.7	No
CO	1-hr	40,000	2,000	43.5	No
NO ₂ *	Annual	100	1	0.2	No
NO ₂ *	1-hr	188	7.5	7.2	No

*The NO₂ was modeled as NO_x.

Table D - Preliminary Modeling Impacts New 120 Foot Tall Exhaust Stack

Pollutant	Averaging Time	NAAQS (µg/m ³)	SIL (µg/m ³)	Highest Predicted Impact (µg/m ³)	Greater than SIL / Additional Modeling Required?
CO	8-hr	10,000	500	2.3	No
CO	1-hr	40,000	2,000	3.7	No
NO ₂ *	Annual	100	1	0.02	No
NO ₂ *	1-hr	188	7.5	0.6	No

*The NO₂ was modeled as NO_x.

Key Aspects of Draft Permit Conditions

The draft permit includes new permit conditions related to the proposed fuels, used oil and processed biosolids. Another modification since the issuance of the most recent Renewable Operating Permit is the addition of emission limits for PM₁₀ and PM_{2.5}.

- **Emission Limits (By Pollutant)** – The following emission limits are included in the draft permit:
 - PM, PM₁₀, PM_{2.5}, SO₂, and visible emissions limits on the two kilns combined PM₁₀.
 - PM and visible emissions limits on fugitive operations.
- **Material Usage Limits** – The draft permit includes limits on the amount of glycerin, syngas, used oil fuel, and processed biosolids that may be burned in the two kilns. The limits on used oil and processed biosolids are new under the draft permit.

Allowed fuels are limited to Coal, Natural Gas, Glycerin, Syngas, Used Oil, and Processed Biosolids.

- **Process/Operational Restrictions** – The draft permit includes the following restrictions:
 - Limits the fuels that may be burned in the two kilns to coal, natural gas, glycerin, syngas, used oil, and processed biosolids.
 - Limits the length that biosolids may be burned to a 90-day trial period.
- **Federal Regulations** – The facility will continue to be subject to the NESHAP for Lime Manufacturing Plants, 40 CFR Part 63 Subpart AAAAA. The draft permit retains existing conditions from the facilities existing Renewable Operating Permit which ensure compliance with the requirements of the NESHAP.
- **Control Equipment Requirements** – The draft permit requires that each of the two kilns be equipped with a baghouse dust collector to control PM, PM10, and PM2.5 emissions.
- **Testing & Monitoring Requirements** – The draft permit includes the following requirements for the kilns:
 - Verification of PM, PM10, PM2.5, and SO₂ emission rates through performance testing separately for both used oil fuel and for processed biosolids fuel.
 - Requirements that the facility keep usage records of the amount and types of fuels burned on a daily, monthly, and 12-month rolling time period basis.
 - Requirements that the facility keep records of the sulfur content the glycerin, syngas, and used oil fuels burned.
 - Requirements that the daily feedrate of limestone be kept and maintained.
- **Exhaust Stack Requirements** – The draft permit requires that the new 120 foot tall exhaust stack be installed and operating by October 1, 2018.

Conclusion

Based on the analyses conducted to date, staff concludes that the proposed project would comply with all applicable state and federal air quality requirements. Staff also concludes that this project, as proposed, would not violate the federal NAAQS or the state and federal PSD increments.

Based on these conclusions, staff has developed draft permit terms and conditions which would ensure that the proposed facility design and operation are enforceable and that sufficient monitoring, recordkeeping, and reporting would be performed by the applicant to determine compliance with these terms and conditions. If the permit application is deemed approvable, the delegated decision maker may determine a need for additional or revised conditions to address issues raised during the public participation process.

If you would like additional information about this proposal, please contact Ms. Ambrosia Brown, AQD, at 517-284-6788.

Appendix 1
STATE AIR REGULATIONS

State Rule	Description of State Air Regulations
R 336.1201	Requires an Air Use Permit for new or modified equipment that emits, or could emit, an air pollutant or contaminant. However, there are other rules that allow smaller emission sources to be installed without a permit (see Rules 336.1279 through 336.1290 below). Rule 336.1201 also states that the Department can add conditions to a permit to assure the air laws are met.
R 336.1205	Outlines the permit conditions that are required by the federal Prevention of Significant Deterioration (PSD) Regulations and/or Section 112 of the Clean Air Act. Also, the same types of conditions are added to their permit when a plant is limiting their air emissions to legally avoid these federal requirements. (See the Federal Regulations table for more details on PSD.)
R 336.1224	New or modified equipment that emits toxic air contaminants must use the Best Available Control Technology for Toxics (T-BACT). The T-BACT review determines what control technology must be applied to the equipment. A T-BACT review considers energy needs, environmental and economic impacts, and other costs. T-BACT may include a change in the raw materials used, the design of the process, or add-on air pollution control equipment. This rule also includes a list of instances where other regulations apply and T-BACT is not required.
R 336.1225 to R 336.1232	The ambient air concentration of each toxic air contaminant emitted from the project must not exceed health-based screening levels. Initial Risk Screening Levels (IRSL) apply to cancer-causing effects of air contaminants and Initial Threshold Screening Levels (ITSL) apply to non-cancer effects of air contaminants. These screening levels, designed to protect public health and the environment, are developed by Air Quality Division toxicologists following methods in the rules and U.S. EPA risk assessment guidance.
R 336.1279 to R 336.1291	These rules list equipment to processes that have very low emissions and do not need to get an Air Use permit. However, these sources must meet all requirements identified in the specific rule and other rules that apply.
R 336.1299(2)(b)	Adopts by reference the provisions of 40 CFR 63.40 to 63.44 (2002) and 40 CFR 63.50 to 63.56 (2002), the federal hazardous air pollutant regulations governing constructed or reconstructed major sources.
R 336.1301	Limits how air emissions are allowed to look at the end of a stack. The color and intensity of the color of the emissions is called opacity.
R 336.1331	The particulate emission limits for certain sources are listed. These limits apply to both new and existing equipment.
R 336.1370	Material collected by air pollution control equipment, such as dust, must be disposed of in a manner, which does not cause more air emissions.
R 336.1401 and R 336.1402	Limit the sulfur dioxide emissions from power plants and other fuel burning equipment.
R 336.1601 to R 336.1651	Volatile organic compounds (VOCs) are a group of chemicals found in such things as paint solvents, degreasing materials, and gasoline. VOCs contribute to the formation of smog. The rules set VOC limits or work practice standards for existing equipment. The limits are based upon Reasonably Available Control Technology (RACT). RACT is required for all equipment listed in Rules 336.1601 through 336.1651.
R 336.1702	New equipment that emits VOCs is required to install the Best Available Control Technology (BACT). The technology is reviewed on a case-by-case basis. The VOC limits and/or work practice standards set for a particular piece of new equipment cannot be less restrictive than the Reasonably Available Control Technology limits for existing equipment outlined in Rules 336.1601 through 336.1651.
R 336.1801	Nitrogen oxide emission limits for larger boilers and stationary internal combustion engines are listed.
R 336.1901	Prohibits the emission of an air contaminant in quantities that cause injurious effects to human health and welfare, or prevent the comfortable enjoyment of life and property. As an example, a violation may be cited if excessive amounts of odor emissions were found to be preventing residents from enjoying outdoor activities.

STATE AIR REGULATIONS

State Rule	Description of State Air Regulations
R 336.1910	Air pollution control equipment must be installed, maintained, and operated properly.
R 336.1911	When requested by the Department, a facility must develop and submit a malfunction abatement plan (MAP). This plan is to prevent, detect, and correct malfunctions and equipment failures.
R 336.1912	A facility is required to notify the Department if a condition arises which causes emissions that exceed the allowable emission rate in a rule and/or permit.
R 336.2001 to R 336.2060	Allow the Department to request that a facility test its emissions and to approve the protocol used for these tests.
R 336.2501 to R 336.2514	Regulates mercury emissions from any stationary coal-fired electric generating unit (EGU) serving a generator with a nameplate capacity of more than 25 megawatts producing electricity for sale. The program begins January 1, 2015 and contains provisions for existing and new EGUs. Mercury program eligibility provisions and prohibitions, demonstration plans, testing, monitoring, record keeping, and reporting are all part of the rule.
R 336.2801 to R 336.2804 Prevention of Significant Deterioration (PSD) Regulations	The PSD rules allow the installation and operation of large, new sources and the modification of existing large sources in areas that are meeting the National Ambient Air Quality Standards (NAAQS). The regulations define what is considered a large or significant source, or modification. In order to assure that the area will continue to meet the NAAQS, the permit applicant must demonstrate that it is installing the BACT. By law, BACT must consider the economic, environmental, and energy impacts of each installation on a case-by-case basis. As a result, BACT can be different for similar facilities.
Best Available Control Technology (BACT)	In its permit application, the applicant identifies all air pollution control options available, the feasibility of these options, the effectiveness of each option, and why the option proposed represents BACT. As part of its evaluation, the Air Quality Division verifies the applicant's determination and reviews BACT determinations made for similar facilities in Michigan and throughout the nation.
R 336.2901 to R 336.2903 and R 336.2908	Applies to new "major stationary sources" and "major modifications" as defined in R 336.2901. These rules contain the permitting requirements for sources located in nonattainment areas that have the potential to emit large amounts of air pollutants. To help the area meet the NAAQS, the applicant must install equipment that achieves the Lowest Achievable Emission Rate (LAER). LAER is the lowest emission rate required by a federal rule, state rule, or by a previously issued construction permit. The applicant must also provide emission offsets, which means the applicant must remove more pollutants from the air than the proposed equipment will emit. This can be done by reducing emissions at other existing facilities. As part of its evaluation, the AQD verifies that no other similar equipment throughout the nation is required to meet a lower emission rate and verifies that proposed emission offsets are permanent and enforceable.

FEDERAL AIR REGULATIONS

Citation	Description of Federal Air Regulations or Requirements
Section 109 of the Clean Air Act – National Ambient Air Quality Standards (NAAQS)	The United States Environmental Protection Agency has set maximum permissible levels for seven pollutants. These NAAQS are designed to protect the public health of everyone, including the most susceptible individuals, children, the elderly, and those with chronic respiratory ailments. The seven pollutants, called the criteria pollutants, are carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter less than 10 microns (PM10), particulate matter less than 2.5 microns (PM2.5), and sulfur dioxide. Portions of Michigan are currently non-attainment for sulfur dioxide. Further, in Michigan, State Rules 336.1225 to 336.1232 are used to ensure the public health is protected from other compounds.

FEDERAL AIR REGULATIONS

Citation	Description of Federal Air Regulations or Requirements
40 CFR 51 Appendix S Emission Offset Interpretive Ruling	Appendix S applies during the interim period between nonattainment designation and EPA approval of a SIP that satisfies nonattainment requirements specified in Part D of the Clean Air Act. Appendix S would apply in nonattainment areas where either no nonattainment permit rules apply or where the existing state rules are less stringent than Appendix S.
40 CFR 52.21 – Prevention of Significant Deterioration (PSD) Regulations Best Available Control Technology (BACT)	<p>The PSD regulations allow the installation and operation of large, new sources and the modification of existing large sources in areas that are meeting the NAAQS. The regulations define what is considered a large or significant source, or modification.</p> <p>In order to assure that the area will continue to meet the NAAQS, the permit applicant must demonstrate that it is installing BACT. By law, BACT must consider the economic, environmental, and energy impacts of each installation on a case-by-case basis. As a result, BACT can be different for similar facilities.</p> <p>In its permit application, the applicant identifies all air pollution control options available, the feasibility of these options, the effectiveness of each option, and why the option proposed represents BACT. As part of its evaluation, the Air Quality Division verifies the applicant's determination and reviews BACT determinations made for similar facilities in Michigan and throughout the nation.</p>
40 CFR 60 – New Source Performance Standards (NSPS)	The United States Environmental Protection Agency has set national standards for specific sources of pollutants. These New Source Performance Standards (NSPS) apply to new or modified equipment in a particular industrial category. These NSPS set emission limits or work practice standards for over 60 categories of sources.
40 CFR 63— National Emissions Standards for Hazardous Air Pollutants (NESHAP)	The United States Environmental Protection Agency has set national standards for specific sources of pollutants. The National Emissions Standards for Hazardous Air Pollutants (NESHAP) (a.k.a. Maximum Achievable Control Technology (MACT) standards) apply to new or modified equipment in a particular industrial category. These NESHAPs set emission limits or work practice standards for over 100 categories of sources.
Section 112 of the Clean Air Act Maximum Achievable Control Technology (MACT) Section 112g	<p>In the Clean Air Act, Congress listed 189 compounds as Hazardous Air Pollutants (HAPS). For facilities which emit, or could emit, HAPS above a certain level, one of the following two requirements must be met:</p> <ol style="list-style-type: none"> 1) The United States Environmental Protection Agency has established standards for specific types of sources. These Maximum Achievable Control Technology (MACT) standards are based upon the best-demonstrated control technology or practices found in similar sources. 2) For sources where a MACT standard has not been established, the level of control technology required is determined on a case-by-case basis.

Notes: An "Air Use Permit," sometimes called a "Permit to Install," provides permission to emit air contaminants up to certain specified levels. These levels are set by state and federal law, and are set to protect health and welfare. By staying within the levels set by the permit, a facility is operating lawfully, and public health and air quality are protected.

The Air Quality Division does not have the authority to regulate noise, local zoning, property values, off-site truck traffic, or lighting.

These tables list the most frequently applied state and federal regulations. Not all regulations listed may be applicable in each case. Please refer to the draft permit conditions provided to determine which regulations apply.

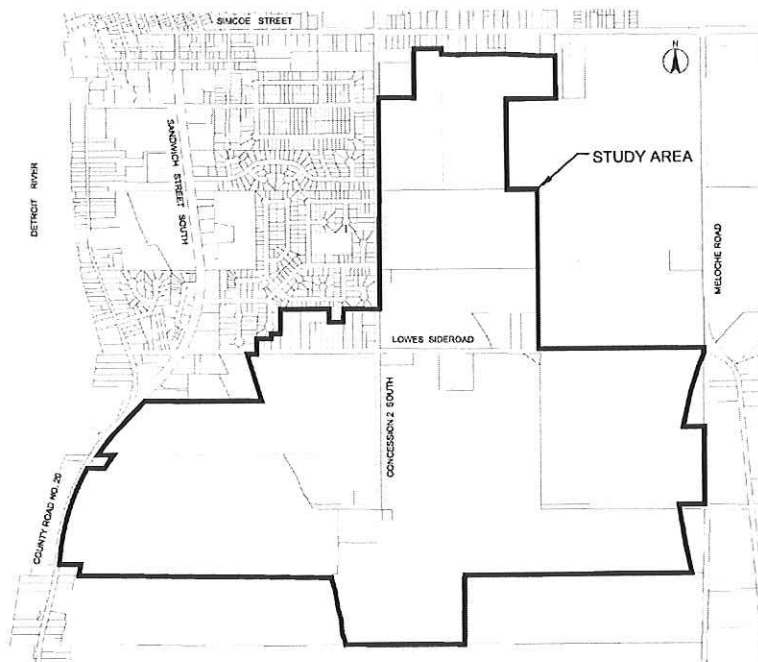


NOTICE OF STUDY COMMENCEMENT SCHEDULE 'B' CLASS ENVIRONMENTAL ASSESSMENT SOUTHEAST QUADRANT SANITARY AND WATER SERVICING STUDY

TOWN OF AMHERSTBURG

The Town of Amherstburg has initiated a Municipal Class Environmental Assessment (Class EA) to provide proposed new developments in the southeast quadrant of the urban hub of the Town with adequate water and sanitary sewage servicing. The study area is outlined on the key plan below. Stantec Consulting Ltd. has been retained by the Town of Amherstburg to complete the study.

The southeast quadrant, approximately 289 hectares (ha), is comprised mostly of rural agricultural land with small pockets of residential land use. The area is not presently serviced by an existing municipal wastewater collection system and the existing watermain system is not sized sufficiently to support future growth. Within the southeast quadrant, existing residential lots are generally serviced by private on-site sewage disposal systems, typically consisting of septic tanks and leaching beds and small watermains. In 2014, the Town of Amherstburg completed upgrades and expansion of the existing Amherstburg Wastewater Treatment Plant (AWWTP) and upgrades to the main sewage pumping station, to accommodate current and future wastewater flows. Several developers have requested that the Town of Amherstburg install the necessary sanitary and water servicing infrastructure in the southeast quadrant to allow for the orderly development of the lands.



The study will address impacts to existing and surrounding lands and to the environment.

The study is being undertaken in accordance with the planning and design process for 'Schedule B' projects outlined in the Municipal Class Environmental Assessment (June 2000, as amended in 2007, 2011 and 2015) under the Ontario *Environmental Assessment Act*.

A key component of the study will be consultation with interested stakeholders. Two Public Information Centres (PIC) are currently planned for this project. The PICs will be held to present and discuss the need and justification for the requested municipal infrastructure servicing, the existing study area conditions, and assessment of alternative solutions and design concepts.

At this time, the study team is requesting comments regarding the existing conditions and related infrastructure in the study area. If a person wishes to comment on this project, have your name added to the project mailing list, or have any questions about this project, please contact one of the individuals identified below:

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Under the *Municipal Freedom of Information and Protection of Privacy Act* and the *Ontario Environmental Assessment Act*, unless otherwise stated in the submission, with the exception of personal information, all comments will become part of the public record and will be released, if requested, to any person.

STATE OF MICHIGAN

Rick Snyder, Governor



DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

CONSTITUTION HALL • 525 WEST ALLEGAN STREET • P.O. BOX 30260 • LANSING, MICHIGAN 48909-7760
www.michigan.gov/air

PUBLIC PARTICIPATION DOCUMENTS

For

DTE Dearborn CEP LLC
Dearborn, Michigan

PERMIT APPLICATION NUMBER

144-17

February 14, 2018

FACT SHEET

February 14, 2018

Purpose and Summary

The Michigan Department of Environmental Quality (MDEQ), Air Quality Division (AQD), is proposing to act on Permit to Install (PTI) application No. 144-17 from DTE Dearborn CEP LLC (DTE). The permit application is for a proposed installation and operation of a new combined heat and power (CHP) plant. CHP plants produce both electricity and steam. The proposed project is subject to permitting requirements of the MDEQ's Rules for Air Pollution Control. Prior to acting on this application, the AQD is holding a public comment period and a public hearing to allow all interested parties the opportunity to comment on the proposed PTI. All relevant information received during the comment period and hearing will be considered by the decision maker prior to taking final action on the application.

Background Information

The new DTE CHP plant is proposed to be located at 1641 Carol Shelby Way East, Dearborn, Michigan. That location is within the existing Ford Motor Company's R&E Center's (Ford) campus. Ford currently operate five boilers which provide steam to the R&E Center. They are planning on shutting down some of the existing boilers; however, to do so, they need steam to be provided from somewhere else. The new DTE plant will provide this steam. It will also produce electricity which will be sold to the grid.

While Ford requires a certain steam load from DTE and is providing them with a location for the plant, DTE will be responsible for compliance with any permits they must acquire. The two facilities will have different functions: research and development for the automotive industry and heat and power production. Though their facilities will be contiguous, they will be considered separate stationary sources due to the fact that they are controlled by different entities and they are part of different industrial groupings.

The Ford R&E Center has active permits, including a Title V Renewable Operating Permit (ROP). None of Ford's existing permits will be affected by the proposed project. The location of the proposed plant is considered a greenfield site and has no current permits. If the proposed project is installed, it will not trigger the need for a ROP.

Proposed Facility and Present Air Quality

DTE is proposing to install a CHP plant. CHP plants produce both electricity and steam. The proposed plant will consist of two natural gas-fired combustion turbine generators (CTGs) with associated heat recovery steam generators (HRSGs). These units are often called CTG/HRSG trains. The CTG must exhaust through the HRSG, so the proposed permit combines them into one emission unit. Each HRSG will be equipped with duct burners. The duct burners create additional heat to produce more steam. In addition, a small natural gas-fired emergency engine is proposed.

The proposed CTGs are each rated at 161.1 million British thermal units per hour (MMBTU/hr) and will generate electricity. As the hot exhaust air flows through the HRSG, steam is generated. The steam will either be provided to the Ford R&E Center or it will be used in a steam turbine generator to create additional electricity. The proposed duct burners will each be rated at 127 MMBTU/hr and add additional heat to the CTG's exhaust stream to generate more steam. Therefore, the CTG/HRSG trains will each have a combined 288.1 MMBTU/hr.

The facility is located in the portion of Wayne County which is currently meeting all of the National Ambient Air Quality Standards (NAAQS) set by the USEPA, except for SO₂. The other air quality standards are for particulate matter equal to or less than 10 microns in diameter (PM₁₀), particulate matter equal to or less than 2.5 microns in diameter (PM_{2.5}), ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), and lead. All of the standards are set at levels designed to protect the public health. It is anticipated that the USEPA will designate Wayne County as non-attainment for ozone in the Spring of 2018.

Pollutant Emissions

The potential to emit (PTE) for the proposed project is under 100 tons per year (tpy) of each regulated air pollutant. Therefore, the CHP plant will be a new minor stationary source and will not be subject to the prevention of significant deterioration (PSD) regulations in Part 18 of the Michigan Air Pollution Control (MAPC) Rules and 40 CFR 52.21, or the Title V program.

The following table provides the estimated emissions for each regulated pollutant:

Table A – Total Project Emissions

Pollutant	Estimated Emissions (tpy)
Particulate Matter (PM)	3.25
PM ₁₀	11.54
PM _{2.5}	11.54
SO ₂	4.97
CO	90.47
NO _x	87.97
Volatile Organic Compounds (VOCs)	11.63
Greenhouse gases (GHG) as carbon dioxide equivalents (CO ₂ e)*	200,269

* A recent decision by the Supreme Court (*Utility Air Regulatory Group v. U.S. EPA*), No. 12-1146 (June 23, 2014)) determined that PSD review for GHGs is only required if one or more of the other regulated pollutants exceeds a PSD threshold.

Key Permit Review Issues

Staff evaluated the proposed project to identify all state rules and federal regulations which are, or may be, applicable. The tables in Appendix 1 summarize these rules and regulations.

- **Prevention of Significant Deterioration (PSD) Regulations** – The proposed CHP plant is considered a “a fossil fuel fired steam electric plant of more than 250 MMBtu/hr heat input,” which is one of 28 source categories listed in the PSD regulations that has a PSD major source threshold of 100 tpy. Therefore, if the emissions of any regulated pollutant for which the area is in attainment for are greater than 100 tpy, the proposed project would be subject to PSD. As the following Table shows, the proposed emissions of each attainment pollutant are less than 100 tpy, thus the project is not subject to the PSD requirements.

Table B – Project PSD Applicability

Pollutant	Potential Emissions (tpy)	PSD Threshold (tpy)	Subject to PSD
PM	3.25	100	No
PM10	11.54	100	No
PM2.5	11.54	100	No
CO	90.30	100	No
NO _x	87.89	100	No
VOC	11.59	100	No

- **Major Source Nonattainment Pollutant Regulations** – The new CHP plant is proposed to be located in the portion of Wayne County that is in nonattainment for SO₂. The applicability threshold for nonattainment new sources review requirements for a new source is 100 tpy of the nonattainment pollutant. Therefore, if the emissions of SO₂ are greater than 100 tpy, the proposed project would be subject to major source nonattainment permitting requirements. As the following Table shows, the proposed emissions of SO₂ are less than 100 tpy, thus the project is not subject to major source nonattainment permitting requirements.

Table C – Project Nonattainment Permitting Applicability

Pollutant	Potential Emissions (tpy)	Nonattainment Permitting Threshold (tpy)	Subject to Nonattainment Permitting
SO ₂	4.97	100	No

- **Rule 205 Limiting Potential to Emit (PTE)** – Per MAPC Rule 336.1205, a facility may voluntarily accept restrictions in order to limit their PTE. Through this permitting process, DTE is proposing to take restrictions that limit the PTE of the proposed CHP plant and of the proposed engine. Without these restrictions, this permitting action would otherwise be subject to PSD review.

The proposed permit includes emission limits of 87.7 tpy for NO_x and 89.9 tpy for CO for the CHP plant. These were arrived at by summing the emissions from the three different operating scenarios in which the plant will operate: baseload, startup and shutdown, and sub-zero. The calculations are conservative in that baseload operations were based upon 8,760 hours and that the emissions from the other operating scenarios were added to them. With a 500 hour per year restriction on the engine, it contributes less than a ton of NO_x and CO to the facility-wide emission calculations. Review of DTE's emissions calculations confirmed that the PTE has been appropriately limited.

The enforceable restrictions that are associated with the synthetic minor limits in the draft permit conditions are further discussed below in the "Key Aspects of the Permit Conditions" section of this document.

- **Federal NSPS Regulations** – New Source Performance Standards (NSPS) were established under Title 40 of the Code of Federal Regulations (40 CFR) Part 60.

The proposed CTGs are subject to the NSPS for Stationary Combustion Turbines, 40 CFR Part 60 Subpart KKKK. Subpart KKKK contains a NO_x emission limit and a sulfur fuel content restriction and associated compliance requirements. If the CTG is associated with HRSGs or duct burners, then the entire CTG/HRSG train must comply with the NO_x emission limit.

The proposed emergency engine is subject to the NSPS for Stationary Spark Ignition Internal Combustion Engines, 40 CFR Part 60 Subpart JJJJ. Subpart JJJJ contains NO_x, CO, and VOC emission limits and associated compliance requirements.

- **Federal NESHAP Regulations** – National Emission Standards for Hazardous Air Pollutants (NEHAP) were established under 40 CFR Part 61 or Part 63. There are no Part 61 regulations associated with the equipment in this project. Part 63 NESHAPs applicability is dependent on the potential hazardous air pollutants (HAPs) emissions of a facility. A major source under the NESHAPs is defined as having a PTE of 10 tpy for a single HAP or 25 tpy for all HAPs combined. For the proposed CHP plant, the highest single HAP is just over 1 tpy and the aggregate HAPs are less than 5 tpy; therefore, the facility will be an area source of HAPs.

The proposed CTGs are not subject to the NESHAP for Stationary Combustion Turbines, 40 CFR Part 63 Subpart YYYY, because Subpart YYYY is only applicable to major sources of HAPs.

The proposed new emergency engine is subject to the NESHAP for Stationary Reciprocating Internal Combustion Engines, 40 CFR Part 63 Subpart ZZZZ. The only requirement is to comply with NSPS, Subpart JJJJ.

- **Rule 224 T-BACT Analysis** – Michigan Air Pollution Control Rule R 336.1224 requires best available control technology for toxics (TBACT). However, the requirements of Rule 224 do not apply to any process subject to a federal NESHAP. In addition, the requirements of Rule 224 do apply to toxic air containments (TACs) that are particulates or VOCs and are in compliance with best available control technology (BACT). As the proposed engine is subject to NESHAP Subpart ZZZZ, it is not subject to TBACT. HAPs from natural gas combustion in turbines and duct burners are considered to be VOCs and are subject to BACT under MAPC Rule 702.
- **Rule 225 Toxics Analysis** – The MAPC Rules require the ambient air concentration of TACs be compared against health-based screening levels. The AQD staff reviewed DTE's air quality modeling and evaluation of TAC impacts. The review found that all TACs show impacts less than the established health-based screening levels and will comply with the requirements of Rule 225.

Formaldehyde was the TAC that passed its screening levels at the highest percentage at 18.6 percent of the 24-hour Initial Threshold Screening Level (ITSL) and 79.2 percent of the Initial Risk Screening Level (IRSL). An ITSL is protective for noncancer and an IRSL is protective for long-term carcinogenic risk. A large component of the formaldehyde impacts is due to the emergency engine. The emergency engine is not expected to operate the vast majority of the time, so the actual impact from formaldehyde from the facility is expected to be less than the evaluated impact.

Total formaldehyde emissions are limited through the heat input restriction on the duct burners and the hours of operation restriction on the engine.

- **Rule 702 VOC Emissions** – This rule requires an evaluation of the following four items to determine what will result in the lowest maximum allowable emission rate of VOCs:
 - a. BACT or a limit listed by the department on its own initiative
 - b. New Source Performance Standards (NSPS)
 - c. VOC emission rate specified in another permit
 - d. VOC emission rate specified in the Part 6 rules for existing sources

An evaluation of these four items determined that a VOC BACT (702(a)) analysis would dictate the lowest maximum allowable emission rate of VOC from the CHP plant. The emissions from the CHP plant will contain low concentrations of VOCs making many control technologies infeasible. Oxidation technology would be technically feasible, but not economically feasible for less than 12 tpy of VOCs. Based upon no VOC controls, good combustion practices were determined to be BACT.

- **Criteria Pollutants Modeling Analysis** – Computer dispersion modeling was performed to predict the impacts of air emissions from NO_x and PM_{2.5}. NO_x refers specifically to nitrogen oxide and NO₂, with the larger portion being NO₂. NO₂ is a highly reactive gas and is the pollutant for which the USEPA established a NAAQS. For this modeling demonstration, NO_x was assumed to be 100 percent NO₂, which is a conservative evaluation. Emissions from the proposed facility were evaluated against both the NAAQS and the PSD increments. The NAAQS are intended to protect public health. The PSD increments are intended to allow industrial growth in an area, while ensuring that the area will continue to meet the NAAQS.

The project was modeled at the worst-case operating scenario. This included the assumptions that all turbines, one duct burner, and the engine were operating simultaneously for an entire hour, and one event (worst-case of startup or shutdown) will occur within the hour. The proposed permit was structured around these assumptions.

The first step in this evaluation is to determine the predicted impacts from the proposed project. After the impacts are determined, they are compared to the applicable PSD Significant Impact Levels (SILs). If the project impacts are less than the SIL, then no further review is required. The following table considers the potential emissions from the proposed project for NO₂ and PM_{2.5} and compares them to their respective SILs.

Table D – Significant Impact Levels (SIL)

Pollutant	Averaging Time	SIL (µg/m ³)	Total Maximum Impact	Below SIL?
PM _{2.5}	Annual	0.3	0.43	No
PM _{2.5}	24-hr	1.2	7.0	No
NO ₂	Annual	1	2.8	No
NO ₂	1-hr	7.5	354.0	No

As the modeled impacts for both PM_{2.5} and NO₂ exceeded all of their respective SILs, facility-wide NAAQS and PSD Increment modeling analysis was required.

The PSD increments are compared against the total facility impact plus other increment consuming facilities nearby. In the NAAQS analysis, the total facility impact includes additional nearby facilities, or offsite sources. The total facility impact and the background concentrations, which is data from ambient air monitors, are summed and compared to the NAAQS.

As the following tables show, the emissions of all NO₂ and PM_{2.5} from the proposed project will meet their respective PSD Increments and NAAQS.

Table E – PSD Increment Modeling Impacts

Pollutant	Averaging Time	PSD Increment (µg/m ³)	Predicted Impact (µg/m ³)	Percent of Increment (%)
PM _{2.5}	Annual	4	0.4	10.8
PM _{2.5}	24-hr	9	5.8	64.4
NO ₂	Annual	25	2.8	11.2

Please note, there is not a PSD increment for NO₂ on a 1-hour average.

Table F – NAAQS Modeling Impacts

Pollutant	Averaging Time	NAAQS (µg/m ³)	Predicted Impact (µg/m ³)*	Percent of NAAQS (%)
PM _{2.5}	Annual	12	11.8	98.2
PM _{2.5}	24-hr	35	30.8	88.0
NO ₂	Annual	100	26.3	26.3
NO ₂	1-hr	188	182.5	97.1

*Includes background data.

Key Aspects of Draft Permit Conditions

The proposed permit conditions were drafted to reflect the review that was performed and to include applicable requirements. In particular, conditions related to the synthetic minor restrictions and the applicable NSPS were included.

- **Emission Limits (By Pollutant)** – The proposed permit contains several emission limits:

NSPS Subpart JJJJ emission limits for the engine:

- NO_x – 2.0 g/HP-hr (or 160 ppmvd)
- CO – 4.0 g/HP-hr (or 540 ppmvd).
- VOCs – 1.0 g/HP-hr (or 86 ppmvd). This is an NSPS emission limit, but it also meets the requirements of Rule 702 (VOC BACT).

NSPS Subpart KKKK emission limit for the CTG/HRSG train:

- NO_x – 25 ppmvd at 15 percent O₂. This is an NSPS-only emission limit.

Synthetic minor mass emission limits for the turbines:

- NO_x – 87.7 tpy
- CO – 89.9 tpy

DTE used a different basis for emissions in their application for the turbines and for the CTG/HRSG trains than what is allowed in NSPS Subpart KKKK. In order to calculate the tpy limits accurately over time, the basis for the calculations were included as emission limits for testing purposes:

- To calculate emissions without the duct burners operating, the basis is 12 ppmvd at 15 percent O₂ of NO_x and 15 ppmvd at 15 percent O₂ of CO.
- To calculate emissions with the duct burners operating, the basis is 0.12 lb NO_x per MMBTU and 0.13 lb CO per MMBTU.

Short term emission limits for the turbines:

- NO_x – 8.84 pph without the duct burners operating
- NO_x – 19.04 pph with the duct burners operating
- PM_{2.5} – 1.06 pph without the duct burners operating
- PM_{2.5} – 2 pph with the duct burners operating

These limits were based on dispersion modeling results.

- **Emission Control Device Requirements** – There is no proposed add-on control; however, the turbines will have inherent NO_x control through low NO_x burners. A requirement for the low NO_x burners is included in the draft permit.
- **Usage Limits** – The proposed permit restricts the fuel that may be burned in the combustion turbines, the duct burners, and the emergency engine to pipeline quality natural gas only. Also, the sulfur content of the natural gas is more stringent than required by the turbine NSPS, Subpart KKKK. Restricting the fuel to natural gas only and limiting its sulfur content helps limit the emissions from the proposed plant because other types of fuels could yield higher emissions.
- **Process/Operational Restrictions** – The proposed permit includes the following process/operational restrictions:
 - For all the CTG/HRSG trains together the number of events (startup and shutdown) is limited to 136 per 12-month rolling time period. Recordkeeping is required to demonstrate compliance for this limit.
 - The duct burners (both of them combined) are limited to 600,000 MMBTU per year. This equates to a restriction that is about 27 percent of the maximum fuel input for the entire year.

- For the duct burners, the combined heat input for both is limited to 127 MMBTU per hour, which is also the size of a single duct burner. The hourly calculations were performed as if one duct burner was operating at a time; however, there is a possibility that they may need one to be ramping down its operation while the other comes online. Limiting the combined hourly heat input allows DTE some flexibility in operation, but keeps the hourly emission calculation to what was evaluated.
 - The emergency engine is limited to maximum operation of 500 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. Additionally, DTE shall install, maintain, and operate the emergency engine according to the manufacturer's written instructions, and only change those engine settings that are allowed by the engine manufacturer. Recordkeeping is included in the permit to demonstrate compliance.
 - That DTE must develop and follow a Malfunction Abatement Plan (MAP) for the CTG/HRSG trains. The plan shall include a preventative maintenance program and corrective procedures in the event of an equipment malfunction or failure.
 - That DTE must create and implement a plan that describes how emissions will be minimized during startup and shutdown for the CTG/HRSG trains. This plan will incorporate procedures recommended by the equipment manufacturer as well as incorporate standard industry practices.
- **Testing & Monitoring Requirements** – The proposed permit includes the following performance testing requirements for the CHP plant:
 - NSPS Subpart KKKK NO_x testing.
 - Verification of the NO_x and CO emission rates (ppmvd and lb/MMBTU). This testing is to verify the emission calculation basis.
 - Verification of the NO_x and PM_{2.5} emission rates (pph). This testing is to verify the emission rates used for modeling.
 - Testing of the emergency engine is only required if the engine is not certified or is a certified engine that has not been operated or maintained as a certified engine. This is an NSPS Subpart JJJJ requirement.
 - **Federal Regulations** – The turbines will be subject to NSPS Subpart KKKK and the emergency engine will be subject NSPS Subpart JJJJ. The proposed permit specifies that compliance with certain permit conditions will constitute compliance with the respective NSPS for each through emission limits, process/operational restrictions, testing or certification, monitoring/recordkeeping, and reporting.

Some requirements of Subpart KKKK are more stringent in the proposed permit than in the regulation. The sulfur content allowed in the natural gas is higher in the NSPS than in the proposed permit limit; however, DTE agreed to the lower value.

The emergency engine will also be subject to NESHAP Subpart ZZZZ. This regulation requires that the engine comply with NSPS, Subpart JJJJ. The proposed permit requires compliance with NSPS Subpart JJJJ and includes a high-level citation requiring the engine to comply with its NESHAP.

Conclusion

Based on the analyses conducted to date, AQD staff concludes that the proposed project would comply with all applicable state and federal air quality requirements. Staff also concludes that this project, as proposed, would not violate the federal NAAQS or the state and federal PSD increments.

Based on these conclusions, staff has developed draft permit terms and conditions which would ensure that the proposed facility design and operation are enforceable and that sufficient monitoring, recordkeeping, and reporting would be performed by the applicant to determine compliance with these terms and conditions. If the permit application is deemed approvable, the delegated decision maker may determine a need for additional or revised conditions to address issues raised during the public participation process.

If you would like additional information about this proposal, please contact Ms. Catherine Asselin, AQD, at 517-284-6786.

Appendix 1
STATE AIR REGULATIONS

State Rule	Description of State Air Regulations
R 336.1201	Requires an Air Use Permit for new or modified equipment that emits, or could emit, an air pollutant or contaminant. However, there are other rules that allow smaller emission sources to be installed without a permit (see Rules 336.1279 through 336.1290 below). Rule 336.1201 also states that the Department can add conditions to a permit to assure the air laws are met.
R 336.1205	Outlines the permit conditions that are required by the federal Prevention of Significant Deterioration (PSD) Regulations and/or Section 112 of the Clean Air Act. Also, the same types of conditions are added to their permit when a plant is limiting their air emissions to legally avoid these federal requirements. (See the Federal Regulations table for more details on PSD.)
R 336.1224	New or modified equipment that emits toxic air contaminants must use the Best Available Control Technology for Toxics (T-BACT). The T-BACT review determines what control technology must be applied to the equipment. A T-BACT review considers energy needs, environmental and economic impacts, and other costs. T-BACT may include a change in the raw materials used, the design of the process, or add-on air pollution control equipment. This rule also includes a list of instances where other regulations apply and T-BACT is not required.
R 336.1225 to R 336.1232	The ambient air concentration of each toxic air contaminant emitted from the project must not exceed health-based screening levels. Initial Risk Screening Levels (IRSL) apply to cancer-causing effects of air contaminants and Initial Threshold Screening Levels (ITSL) apply to non-cancer effects of air contaminants. These screening levels, designed to protect public health and the environment, are developed by Air Quality Division toxicologists following methods in the rules and U.S. EPA risk assessment guidance.
R 336.1279 to R 336.1291	These rules list equipment to processes that have very low emissions and do not need to get an Air Use permit. However, these sources must meet all requirements identified in the specific rule and other rules that apply.
R 336.1301	Limits how air emissions are allowed to look at the end of a stack. The color and intensity of the color of the emissions is called opacity.
R 336.1331	The particulate emission limits for certain sources are listed. These limits apply to both new and existing equipment.
R 336.1370	Material collected by air pollution control equipment, such as dust, must be disposed of in a manner, which does not cause more air emissions.
R 336.1401 and R 336.1402	Limit the sulfur dioxide emissions from power plants and other fuel burning equipment.
R 336.1601 to R 336.1651	Volatile organic compounds (VOCs) are a group of chemicals found in such things as paint solvents, degreasing materials, and gasoline. VOCs contribute to the formation of smog. The rules set VOC limits or work practice standards for existing equipment. The limits are based upon Reasonably Available Control Technology (RACT). RACT is required for all equipment listed in Rules 336.1601 through 336.1651.
R 336.1702	New equipment that emits VOCs is required to install the Best Available Control Technology (BACT). The technology is reviewed on a case-by-case basis. The VOC limits and/or work practice standards set for a particular piece of new equipment cannot be less restrictive than the Reasonably Available Control Technology limits for existing equipment outlined in Rules 336.1601 through 336.1651.
R 336.1801	Nitrogen oxide emission limits for larger boilers and stationary internal combustion engines are listed.
R 336.1901	Prohibits the emission of an air contaminant in quantities that cause injurious effects to human health and welfare, or prevent the comfortable enjoyment of life and property. As an example, a violation may be cited if excessive amounts of odor emissions were found to be preventing residents from enjoying outdoor activities.
R 336.1910	Air pollution control equipment must be installed, maintained, and operated properly.

STATE AIR REGULATIONS

State Rule	Description of State Air Regulations
R 336.1911	When requested by the Department, a facility must develop and submit a malfunction abatement plan (MAP). This plan is to prevent, detect, and correct malfunctions and equipment failures.
R 336.1912	A facility is required to notify the Department if a condition arises which causes emissions that exceed the allowable emission rate in a rule and/or permit.
R 336.2001 to R 336.2060	Allow the Department to request that a facility test its emissions and to approve the protocol used for these tests.
R 336.2801 to R 336.2804 Prevention of Significant Deterioration (PSD) Regulations	The PSD rules allow the installation and operation of large, new sources and the modification of existing large sources in areas that are meeting the National Ambient Air Quality Standards (NAAQS). The regulations define what is considered a large or significant source, or modification. In order to assure that the area will continue to meet the NAAQS, the permit applicant must demonstrate that it is installing the BACT. By law, BACT must consider the economic, environmental, and energy impacts of each installation on a case-by-case basis. As a result, BACT can be different for similar facilities.
Best Available Control Technology (BACT)	In its permit application, the applicant identifies all air pollution control options available, the feasibility of these options, the effectiveness of each option, and why the option proposed represents BACT. As part of its evaluation, the Air Quality Division verifies the applicant's determination and reviews BACT determinations made for similar facilities in Michigan and throughout the nation.
R 336.2901 to R 336.2903 and R 336.2908	Applies to new "major stationary sources" and "major modifications" as defined in R 336.2901. These rules contain the permitting requirements for sources located in nonattainment areas that have the potential to emit large amounts of air pollutants. To help the area meet the NAAQS, the applicant must install equipment that achieves the Lowest Achievable Emission Rate (LAER). LAER is the lowest emission rate required by a federal rule, state rule, or by a previously issued construction permit. The applicant must also provide emission offsets, which means the applicant must remove more pollutants from the air than the proposed equipment will emit. This can be done by reducing emissions at other existing facilities. As part of its evaluation, the AQD verifies that no other similar equipment throughout the nation is required to meet a lower emission rate and verifies that proposed emission offsets are permanent and enforceable.

FEDERAL AIR REGULATIONS

Citation	Description of Federal Air Regulations or Requirements
Section 109 of the Clean Air Act – National Ambient Air Quality Standards (NAAQS)	The United States Environmental Protection Agency has set maximum permissible levels for seven pollutants. These NAAQS are designed to protect the public health of everyone, including the most susceptible individuals, children, the elderly, and those with chronic respiratory ailments. The seven pollutants, called the criteria pollutants, are CO, lead, NO ₂ , ozone, PM ₁₀ , PM _{2.5} , and SO ₂ . Portions of Michigan are currently nonattainment for SO ₂ . Further, in Michigan, State Rules 336.1225 to 336.1232 are used to ensure the public health is protected from other compounds.

FEDERAL AIR REGULATIONS

Citation	Description of Federal Air Regulations or Requirements
<p>40 CFR 52.21 – Prevention of Significant Deterioration (PSD) Regulations</p> <p>Best Available Control Technology (BACT)</p>	<p>The PSD regulations allow the installation and operation of large, new sources and the modification of existing large sources in areas that are meeting the NAAQS. The regulations define what is considered a large or significant source, or modification.</p> <p>In order to assure that the area will continue to meet the NAAQS, the permit applicant must demonstrate that it is installing BACT. By law, BACT must consider the economic, environmental, and energy impacts of each installation on a case-by-case basis. As a result, BACT can be different for similar facilities.</p> <p>In its permit application, the applicant identifies all air pollution control options available, the feasibility of these options, the effectiveness of each option, and why the option proposed represents BACT. As part of its evaluation, the Air Quality Division verifies the applicant's determination and reviews BACT determinations made for similar facilities in Michigan and throughout the nation.</p>
<p>40 CFR 60 – New Source Performance Standards (NSPS)</p>	<p>The United States Environmental Protection Agency has set national standards for specific sources of pollutants. These New Source Performance Standards (NSPS) apply to new or modified equipment in a particular industrial category. These NSPS set emission limits or work practice standards for over 60 categories of sources.</p>
<p>40 CFR 63— National Emissions Standards for Hazardous Air Pollutants (NESHAP)</p>	<p>The United States Environmental Protection Agency has set national standards for specific sources of pollutants. The National Emissions Standards for Hazardous Air Pollutants (NESHAP) (a.k.a. Maximum Achievable Control Technology (MACT) standards) apply to new or modified equipment in a particular industrial category. These NESHAPs set emission limits or work practice standards for over 100 categories of sources.</p>
<p>Section 112 of the Clean Air Act</p> <p>Maximum Achievable Control Technology (MACT)</p> <p>Section 112g</p>	<p>In the Clean Air Act, Congress listed 189 compounds as Hazardous Air Pollutants (HAPS). For facilities which emit, or could emit, HAPS above a certain level, one of the following two requirements must be met:</p> <ol style="list-style-type: none"> 1) The United States Environmental Protection Agency has established standards for specific types of sources. These Maximum Achievable Control Technology (MACT) standards are based upon the best-demonstrated control technology or practices found in similar sources. 2) For sources where a MACT standard has not been established, the level of control technology required is determined on a case-by-case basis.

Notes: An "Air Use Permit," sometimes called a "Permit to Install," provides permission to emit air contaminants up to certain specified levels. These levels are set by state and federal law, and are set to protect health and welfare. By staying within the levels set by the permit, a facility is operating lawfully, and public health and air quality are protected.

The Air Quality Division does not have the authority to regulate noise, local zoning, property values, off-site truck traffic, or lighting.

These tables list the most frequently applied state and federal regulations. Not all regulations listed may be applicable in each case. Please refer to the draft permit conditions provided to determine which regulations apply.

Subject: Climate Change Adaptation Plan Status and response to CQ34-2017 and CQ41-2017 - City Wide**Reference:**

Date to Council: 2/21/2018

Author: Karina Richters

Supervisor, Environmental Sustainability and Climate Change

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krichters@citywindsor.ca

Pollution Control

Report Date: 1/30/2018

Clerk's File #: E/10822

To: Mayor and Members of City Council

Recommendation:

- I. THAT this Council Report responding to CQ34-2017 – status of the Climate Change Adaptation Plan and CQ41-2017 storm sewer design criteria under climate change **BE RECEIVED FOR INFORMATION**.

Executive Summary:

N/A

Background:

At the September 5, 2017 meeting of Council, Councillor Kusmierczyk asked the following Council Question:

CQ34-2017: *Asks that administration provide a progress report on the city's climate change adaptation plan and confer with ERCA on the feasibility/process of moving forward with a regional climate adaptation plan.*

Following, at the October 16, 2017 meeting of Council, Councillor Payne asked the following Council Question:

CQ40-2017: *Asks for a report on the feasibility of revising storm sewer design criteria in light of climate change.*

10.6

This report will address both questions as they relate to the City's Climate Change Adaptation work.

In November 2010, City Council approved participation in the ICLEI ("Local Governments for Sustainability", formerly the International Council for Local Environmental Initiatives) Canada Adaptation Initiative. The development of the ICLEI initiative was initially sponsored by Natural Resources Canada's Climate Change Impacts and Adaptation Division.

The ICLEI initiative provides a straightforward methodology to adaptation planning using a five milestone approach. The five milestones include; Milestone One – Initiate, Milestone Two – Research, Milestone Three – Plan, Milestone Four – Implement, and Milestone Five – Monitor.

The City of Windsor's Climate Change Adaptation Plan was developed by way of collaboration across City departments and agencies including the Essex Region Conservation Authority and the Windsor Essex County Health Unit.

The City of Windsor's Climate Change Adaptation Plan was approved in principle on November 19, 2012 (M498-2012).

The most recent status report to City Council regarding the Climate Change Adaptation Plan was as part of Report #280 of the Environment, Transportation and Public Safety Report received on July 5, 2015 and approved by M262-2015..

Discussion:

To provide this update to Council, a review was initiated to determine the status of the 22 proposed adaptation actions. To date 7 actions have been completed, 11 actions are progressing, and 4 actions are under review. Actions listed as "completed" are those that satisfy the intent of the adaptation action at the time the plan was finalized, however based on results and recommendations, additional work may be recommended. Those actions that are labelled as "progressing" indicate that work is underway and this work is continuing to meet the intentions of the plan. In most cases, "under review" indicates that some preliminary work is required prior to proceeding with the recommended adaptation action (i.e. in order to determine the best location for off-line storage of storm water the Sewer Master Plan must be completed). Appendix A provides details on the status and proposed next steps for each of the 22 adaptation actions.

In September 2017, the City of Windsor received the final Milestone Award from ICLEI Canada which indicates that all 5 Milestones (Initiate, Research, Plan, Implement, and Monitor) have been completed.

In addition to implementing the Climate Change Adaptation Plan, staff have identified further opportunities to expand on the current climate change work underway.

'Climate Resilient Home'

In July 2016, the City of Windsor was selected to participate in the Province's Great Lakes Climate Change Adaptation Project under the Collaborative Implementation Group: Working Together to Move from Planning to Action. The objective of this project

was to collaborate among municipalities to collectively help overcome barriers and drive municipal action on adaptation. One of the challenges of the Climate Change Adaptation Plan has been public engagement and action. As noted in the attached status table, the City experiences only a 5 – 8% acceptance for the free downspout disconnection program and similarly, a relatively low response rate for the Basement Flooding Subsidy Program. In response, Administration developed a pilot project to retrofit an existing Windsor home towards climate resiliency. The Climate Resilient Home project provides an innovative opportunity to engage the public on ways to mitigate basement flooding and pilot low impact development (LID) features. The location of this pilot is a City of Windsor-owned 1920s era home on Pierre Avenue that is currently used by Horticulture staff. This house provided an opportunity for the City to complete the actions that residents are encouraged to complete including; downspout disconnection; backwater valve installation; and sump pump with overflow installation. Each of these improvements has been documented through a series of videos to better educate the public on how improvements are constructed and maintained. The videos were also promoted to residents following the August storm through the City's website and local media.

In addition, a rain garden and an infiltration trench were installed at the property. These LID features include water level monitors able to log water depths within these features. The availability of this information will aid the City in determining the feasibility of incorporating additional LID features throughout the City as one possibility to address stormwater concerns.

By the spring of this year, Administration will host the public at an open house of the climate resilient home for residents to experience firsthand the actions to help reduce flood risk. As part of the engagement strategy, a website will be developed outlining the features of this home which will include the videos and further information that the public needs to make an informed decision. Educational signage has also been installed at the home.

Leadership in Asset Management

The City of Windsor has been developing its Corporate Asset Management Program since 2009. At the end of 2015, Windsor was one of 12 municipalities across Canada selected for FCM's Leadership in Asset Management Program (LAMP). The objective of this program was to provide support to municipalities to integrate sustainability into municipal asset management plans. The City of Windsor expanded on this opportunity by also including climate change adaptation and mitigation measures into the City's asset management policy and framework. Asset management provides a substantial opportunity to address a changing climate over the long-term. Using the best available science and proven innovation, along with provincial and federal guidance documents, the City will identify climate risks and determine how these risks may impact a community asset over its intended service life. Climate change and climate change activities or actions must, under this policy, be considered for managing both physical and natural assets, as well as ensuring (or improving) the level of service being delivered. The City's next steps will include determining how a changing climate may affect the Triple Bottom Line (Environmental, Social and Economic considerations) or Life Cycle Costing of the City's community assets.

The updated Asset Management Policy and Framework were approved by Council on October 16, 2017 (CR638/2017).

Downtown Windsor Heat Island Study

Building on the previous work undertaken to identify both Urban Heat Islands and thermal comfort issues in City of Windsor parks, Planning co-op students were tasked with studying these issues within the Downtown. The Downtown Heat Island Study is attached as Appendix B. Fourteen site assessments were completed in downtown Windsor that identify existing design characteristics where thermal comfort could be improved. The data from the fourteen sites was synthesized and used to create high-level policy recommendations on how to improve outdoor thermal comfort in public spaces in downtown Windsor. These studies have enhanced the knowledge of staff in regards to extreme heat, urban heat island and thermal comfort risk.

These urban heat island studies are now being referenced as part of ongoing Requests for Proposals for engineering consultants undertaking Class Environmental Assessments for Road Improvement (i.e. University and Victoria Avenue EAs) so that the design stage identifies opportunities for improvements.

Feasibility of Revising Storm Sewer design criteria (CQ41-2017)

As a result of the recent flooding events, the City has accelerated the second phase of the Citywide Sewer Master Plan (SMP). This phase will see the further expansion and calibration the current InfoWorks ICM model (storm, sanitary and combined systems) completed as part of Phase 1. Phase 1 will also develop a major system network using a two-dimensional modelling approach to represent overland flood storage and conveyance.

In conjunction with Phase 2, a Sanitary and Storm Sewer Master Plan Resiliency Study will be completed. This study will use the completed intensity, duration and frequency (IDF) projections completed for the Climate Change Adaptation Plan to run the sewer model. A vulnerability assessment of the current storm, sanitary and combined sewer networks, including pump stations and surface overflow routes, will be analyzed under various climate change considerations. The study will review the potential to reduce the vulnerability of impacts from climate change and identify alternative solutions to reduce the risk of surface and basement flooding, and improving the level of service of the systems. The results of the study should provide guidance on reducing the vulnerability to Climate Change Impacts through:

- Providing remedial surface and basement flooding solutions to increase flooding resiliency under current design storm IDF data conditions and climate change conditions using future IDF curves recently completed;
- Providing solutions to reduce inflow and infiltration (I&I) throughout the sanitary system to reduce the impacts of sanitary surcharging during both current IDF data rainfall conditions and climate change conditions;
- Evaluating and providing potential solutions for increased combined sewer overflow (CSO) under both current IDF data rainfall conditions and climate

change conditions, which may include additional management and treatment, as per MOECC criteria;

- Enhancing the current level of service within the existing sewer systems and pump stations – reducing roadway surface flooding during major storm events; and
- Reducing the impact of severe rainfall events and lessening the extent of basement flooding associated with heavy rainfall events due to climate change.

The results of this study will provide the needed information required to inform revisions to the storm sewer design criteria.

City Council will receive quarterly status updates throughout the development of the Sewer Master Plan.

Recognition

The City's work on Climate Change Adaptation has received recognition from senior levels of government. This work has been promoted through various case studies featured in the various publications including Health Canada's Heat Alert and Response Systems to Protect Health: Best Practices Guidebook and Institute for Catastrophic Loss Reduction's Cities Adapt to Extreme Heat. The Supervisor, Environmental Sustainability and Climate Change has also been recognized by FCM in their series Partners for Climate Protection's (PCP) Local Climate Heroes and is often invited to present on the success of the City's Climate Change Adaptation work.

Weather Events

The City of Windsor has had a number of weather related events in 2016 and 2017 including: 2 floods; a tornado and a wind storm. Though no direct ties can link any single weather event to climate change, all extreme events have various factors influencing the event, and one of the factors can be climate change.

The Insurance Bureau of Canada reports amounts of \$108 million and \$124 million in insured damage as a result of the 2016 and 2017 floods respectively. Munich Re, one of the world's leading reinsurers, estimates that the share of uninsured losses remained substantial at around 70% in 2016. Using this high end number, the actual losses due to these floods could be as high as \$360 million and \$413 million dollars, respectively.

The City of Windsor incurred direct operational costs as follows: 2016 tornado (\$98,372); 2016 flood (\$305,096); 2017 wind storm (\$62,188); and 2017 flood (\$991,164 – preliminary, invoices still being reviewed). The 2016 tornado also caused insured losses of approximately \$840,239 (with an additional deductible paid in the amount of \$100,000) in damage to the Transit Windsor Facility and Photovoltaic (PV) solar system. In addition, the City experienced a \$300,000 loss of solar revenue, of which insurance should cover \$250,000 of these losses.

An independent study commissioned by the US Federal Emergency Management Agency, for example, found that the investment return in the United States was \$4 in cost savings for every \$1 spent on disaster mitigation (climate adaptation). Studies in Australia have found a return of 3:1 from similar investments, and in the United Kingdom, 5:1. These studies highlight one of the economic justifications to continue action on climate change.

Ontario's Climate Change Adaptation Strategy

On November 22, 2017 the Province of Ontario posted to the Environmental Bill of Rights their proposed plan for adapting to climate change. The following is a summary of the proposed actions that will influence the City of Windsor future adaptation strategies.

A New Climate Change Organization

As a first step, the Province proposes to create a new climate change organization. This organization will be a one-window source for leading-edge climate projection data and adaptation information and services. The organization will work with decision-makers in communities, private businesses and government to facilitate adaptation learning, capacity building and initiatives across Ontario. It will partner and work with Ontario's many climate change adaptation experts and existing service delivery agents to help build local adaptation capacity, enhance networks and take action.

Raising Public Awareness

The province also plans to share information regarding the effects of climate change with the public. It is important that Ontario residents gain a real understanding of how a changing climate will affect our homes, businesses, environment and communities, and what we can do to adapt.

Natural Environment

Through recent amendments to the Municipal Act, 2001, municipalities will be required to put a policy in place to protect and enhance their tree canopies and natural vegetation by March 1, 2019. This mandatory policy is an opportunity for municipalities to consider how climate change affects trees, as well as how protecting trees can help increase the climate resiliency of communities.

Land Use Planning

In 2014, the Province updated the Provincial Policy Statement to require municipalities to consider the effects of climate change in planning for resilient communities. This includes planning for new or expanded infrastructure and strengthening protection of natural areas, including wetlands.

Infrastructure and buildings

The Infrastructure for Jobs and Prosperity Act, (O. Reg 588/17), enshrines the principle that infrastructure planning and investment should be designed to be resilient to the effects of climate change. The Long Term Infrastructure Plan will build upon this

principle and lay out our vision for evidence-based planning and investment decisions to build resilient infrastructure across Ontario.

As noted in Report CM 46/2017 considered at the Budget Meeting of January 15, The Province of Ontario along with the City of Burlington has funded the Home Flood Protection Assessment program developed by the Intact Centre on Climate Adaptation at the University of Waterloo. The program is currently being rolled out to 4,000 homes in Burlington. The program helps homeowners reduce risk and minimize damage of flooding through free web-based check-lists, tips, how-to videos and information.

For a fee, residents from Oakville, Hamilton, Kitchener, Waterloo, Cambridge, Guelph, and Milton (Toronto, Hamilton and London also eligible but includes an additional travel fee) can receive a 50-point visual assessment of potential sources of water entry into the home by a trained Assessor. A confidential, easy to read report identifies top ranked actions to:

- Reduce sewer back-up and overland flood risks
- Manage indoor humidity to reduce mold and mildew risks
- Reduce risk of damage to structure and contents
- Wisely manage water onsite
- Understand risks as they relate to insurance coverage

This program is being assessed to inform a broader delivery across Ontario and is being investigated by the City of Windsor.

Future Opportunities

Administration is continually looking to further enhance climate change adaptation initiatives. Two accompanying reports address current opportunities to expand the City's climate change adaptation work. The first is undertaking the redevelopment of the City's Climate Change Adaptation Plan with support from ICLEI Canada (Report S17/2018) through ICLEI's Changemaker project. The second is forming a partnership with the University of Waterloo's Partners for Action and the Red Cross to better understand audiences and targeting messages to increase personal and community flood preparedness (Report S18/2018).

The Essex Region Conservation Authority is currently looking to hire a Climate Change Specialist that will guide the development of a regional climate change adaptation strategy. The Regional Climate Change Strategy will look to improve resilience to climate variability; undertake modelling and assessment to update ERCA's flood line mapping; and formalize monitoring protocols to investigate climate change impacts on watershed resources. Administration looks forward to working with ERCA on a regional climate change adaptation strategy.

Participating in ICLEI's Changemaker project the City of Windsor will be provided with climate science data reports that summarize and coalesce localized science for both historical and climate projection data including summaries of projected changes to temperature, precipitation, intensity-duration frequency curves, and extreme events. This information can be shared with ERCA. Also, as part of this project, localized

workshops will be hosted with local stakeholders. As a key stakeholder in Windsor's Climate Change Adaptation Plan, ERCA will be invited to participate.

Risk Analysis:

No risks were identified with this information report.

Financial Matters:

There are no financial matters related to this information report.

Consultations:

Engineering

Operations

Planning

Transportation Planning

Asset Planning

Essex Region Conservation Authority

Finance

Conclusion:

Implementation of the Climate Change Adaptation Plan has been a corporate-wide undertaking. Administration works to stay informed on the most recent climate science for the region and continually looks for opportunities to further enhance climate change adaptation initiatives to build a more resilient Windsor.

Planning Act Matters: N/A

Approvals:

Name	Title
Karina Richters	Supervisor, Environmental Sustainability and Climate Change
Chris Manzon	Senior Manager Pollution Control
France Isabelle Tunks	City Engineer (Acting)
Onorio Colucci	Chief Administrative Officer

Notifications:

Name	Address	Email
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