



ABOUT THIS DOCUMENT (AND ABOUT ONEIA)

On behalf of Ontario's more than 3,000 environment and cleantech firms, the Ontario Environment Industry Association (ONEIA) is pleased to provide our comments on *Preserving and Protecting our Environment for Future Generations: A Made-in-Ontario Environment Plan (Environment Plan)*.

Ontario is home to Canada's largest group of environment and cleantech companies. The most recent statistics show that Ontario's environment sector employs more than 65,000 people across a range of sub-sectors. This includes firms working in such diverse areas as water/wastewater/stormwater treatment and management, materials collection and transfer, resource recovery, organics processing, composting, recycling solutions, alternative energy systems, environmental consulting, brownfield remediation – to name just a few. These companies contribute more than \$8-billion to the provincial economy, with approximately \$1-billion of this amount coming from export earnings.

Members of ONEIA are committed to engaging with governments to develop policies and regulations that are consistent with our principles of sound science, sound environment and a sound economy. To that end, we convened working groups of member companies drawn from across the environment and cleantech sector to review the Environment Plan.

In assessing the initial measures in the Environment Plan, ONEIA has asked each of its four key industry sub-groups (1. Resource Recovery, 2) Water, 3) Brownfields/Soils, and 4) Climate Change) to convene a wide range of companies and gather their comments. Their feedback forms the basis of this report and each of these sub-committees is ready and willing to work more closely with the Ministry of Environment, Conservation and Parks (MECP) on the specific aspects of the Environment Plan.

This initial document will be supplemented in coming weeks/months with more detailed plans from each subcommittee. For example, our Resource Recovery Committee is already working on more detailed ideas in the areas of the proposed Organics Framework and Modernization of Approvals. Through this process, our members are ready to offer a wealth of "made-in-Ontario" expertise that can help the Province achieve its goals of economic prosperity and environmental protection for current and future generations.

OUR OVERALL FRAMEWORK

Since our founding in 1992, ONEIA has proactively engaged with various levels of government to provide advice on pressing environmental challenges. The overwhelming scientific consensus supports that climate change is real and will accelerate in coming years and that these changes are driven largely by human activity. Consequently, climate change is one of the biggest threats to the health and prosperity of Ontario residents and deserves the full attention and effort of our provincial government, our businesses and our individual citizens.

Ontario environment and cleantech companies believe any plan by any level of government to counter climate change must consider the following three (3) conditions:

1. Will the actions lead to lowering greenhouse gas (GHG) emissions that are driving climate change?
2. Does the plan recognize that a changing climate (and particularly severe climate events) will negatively impact Ontario communities and their supporting infrastructure and that these communities and their infrastructure must be made more resilient?
3. In addressing points (1) and (2), does the plan allow Ontario companies to maximize the economic opportunity inherent in reducing GHGs and developing the next generation of resilient infrastructure?

Put simply, all jurisdictions in the developed world are grappling with the challenge of reducing GHG emissions and making their communities more resilient. By addressing these challenges in Ontario through progressive, evidence-based policies, we can meet the challenge of climate change and create economic opportunities for Ontario companies and our citizens in the process.

RESPONDING IN DETAIL

The following sections offer detailed observations tied to sections of the Environment Plan and the responses offered by subcommittees of ONEIA member companies. This overview offers the general feedback of these companies to the Environment Plan and its elements, and we look forward to following up in detail with respect to specific sections as the Province moves forward with its work in these areas.

Doing Our Part: ONEIA agrees that Ontario has already made considerable progress towards lowering Canada's overall GHG output through such measures as the closure of coal power plants and transitioning to more renewable sources of energy. We still have a way to go, as objectively Ontario has just 0.18% of the world's population but produces 0.4% of the world's GHG emissions – and many of these areas of GHG emissions (particularly buildings and transportation) are growing. We believe that the Environment Plan can catalyze further measures by governments, businesses, and citizens to reduce our (GHG) emissions beyond current levels. Therefore, we recommend the following actions:

- Develop an up-to-date assessment of GHG emissions to highlight sources of concern (i.e. heavy-duty vehicles, industrial emissions, etc.) and geographic areas of highest priority for action. This will give the Province an evidence-based and current guide to the “low hanging fruit” in potential GHG reductions;
- Develop tools to aid governments, businesses, and residents in making choices that help reduce GHG emissions (i.e. transportation, waste, purchasing, energy, etc.); and
- Identify regulatory enhancements to ensure expeditious development of infrastructure needed to help reduce GHG emissions (i.e. public transit, renewable natural gas (RNG), etc.).

ONEIA members have world-leading expertise and experience in these areas and look forward to sharing these examples in our subsequent dialog with the Province as we better understand the direction and goals that will be included in the Environment Plan.

Guiding Principles: ONEIA agrees with the Province on the need for clear rules and strong, objective enforcement. These rules need to be developed transparently and in conjunction with the business community to help the Province meet its regulatory objectives in the most economically productive manner possible. We feel that through data-driven changes, business and government can jointly focus on areas that need further enforcement while providing guidance documents/regulations that will support the growth of various industries that can support the Province's efforts in an economically viable, environmentally sustainable manner.

As mentioned above, we believe in trust and transparency but need further information on what is meant by the "...information and tools required with a focus on real time monitoring" to understand the current environmental challenges.

We also offer the following specific observations and recommendations:

- ONEIA members strongly support these guiding principles as essential to developing a responsible, effective, measurable and balanced system;
- We agree with building resilient communities and that local solutions will be paramount, as the size and breadth of the Province is quite diverse and defies a "one-size fits all" approach. Decision-making in this area must be fact-based and science-driven, as actions in this area too often cater to political or community expediency at the expense of addressing the actual challenge in an efficient manner;
- ONEIA agrees that modernization of approvals and organics management solutions must reflect evidence-based, best scientific practices that address the unique challenges facing communities in Ontario. Providing information and tools to enable Ontarians to understand potential changes to approval processes and to better understand organics management challenges and opportunities is essential. Establishing clear rules for regulating activities and enforcing rules consistently is key to creating trust and confidence in Ontarians.
- ONEIA recognizes that there must be guidance and standards established by the Province to ensure that effective regulatory protections are established and are maintained for emerging and expanding markets. The Environment Plan should focus on smart regulatory and policy approaches to facilitate and enable innovation, which is an essential component to lowering barriers to entry to new technology firms, greater advancements in clean energy and further establishing Ontario's cleantech sector as innovation leaders in this field.

Protecting Our Air, Lakes and Rivers

Incident Reporting: ONEIA supports the concept of an online platform to enable Ontarians to report pollution. We also support the creation of an improved complaint response system that sets clear expectations for inspectors and investigators and provides real-time information.

ONEIA member companies appreciate the importance of a level playing field where polluters are accountable, where the enforcement of offenses is transparent to all Ontarians and sends a clear message to those violating the standards that they should invest in mitigation and better practices.

ONEIA is keen to provide insight to the Province on how to develop an incident reporting system that is accessible, verifiable, responsive and transparent, including member experience with the on-line incident reporting systems in other jurisdictions like British Columbia, Louisiana and Queensland.

Clean Air: ONEIA agrees that the Province should assess and prioritize geographic areas with poorer air quality to identify the relationship to emissions from industrial facilities, roadways and municipal infrastructure, or odour emissions from waste management facilities. All such emissions are currently treated on a site-by-site basis with little assessment of cumulative effects or background conditions that could be impacting the communities or causing friction with businesses and the general public.

We agree that the Province should improve air quality in communities by creating solutions to their individual challenges and welcome the opportunity to work collaboratively with government and municipalities to identify, in a transparent manner, which communities should be prioritized. This information can then be used to support continuous improvement including the development of clearinghouses for information in partnership with the environment industry and local communities. This partnership could also include public health units, Indigenous communities and other stakeholders, as such partnerships will avoid the dangers of a lack of trust and transparency or the lack of funding or clarity on the goals among the different stakeholders.

We agree with the Province on reducing the emissions from heavy duty vehicles and have previously supported the re-focusing of the clean vehicle program on the heavy-duty transportation sector. This focus should address trucks that are based in Ontario as well as trucks that pass through our Province. We believe that the Province should support the conversion of heavy-duty truck fleets that return to base every night (e.g. solid waste collection vehicles, school buses, etc.) to use compressed natural gas/Renewable Natural Gas (RNG) due to the economic and environmental benefits. Various other jurisdictions have completed studies in this area and the merits of such conversion are considerable.

ONEIA welcomes the idea of improving the understanding of different sources of air pollution and their impact, but requires more information in this area to assess the Province's direction. We would, however, support the Province in assessing GHG emissions in this study with a focus on the short-lived climate pollutants (SLCPs) such as hydrofluorocarbons (HFCs), methane, ozone, and black carbon. For clarity, SLCPs are a group of GHGs and air pollutants that have a significant near-term warming impact on climate and can affect local air quality. Key sources of SLCP emissions include on-road and off-road transportation, wood burning appliances, oil and

gas facilities, landfills, farms, and stationary diesel engines (including power generation in Northern Ontario and Indigenous communities).

We concur with the Province that there is a need to improve understanding of varied sources of air pollution and their impact on local air quality, especially in areas that continue to experience air quality issues. Accordingly, we support the government's intention to work with stakeholders to create the unique solutions required to address these air quality challenges (e.g. reducing emissions from heavy-duty vehicles and collaborating with both domestic and international jurisdictions).

ONEIA members know that effective organics management plays a key role in ensuring clean air for Ontarians, and that a comprehensive provincial network of compost, anaerobic digestion and modern landfill facilities is essential. Recovering the environmental and energy benefit of organic material, whether through the nutrients within compost, thermal heat from anaerobic digestion, or RNG from landfill methane collection will allow these facilities to contribute to cleaner air and create economic opportunities.

ONEIA contends that effective approvals modernization is crucial in ensuring clean air for Ontarians, and that the government's interests in protecting the environment while stimulating the economy are better served by a system of approvals that reflects the relative risks of activities based upon science and facts and building upon work done to date including the Environmental Activity and Sector Registry (EASR). ONEIA members have extensive expertise and experience in various environmental approvals and are eager to share with the Province their perspectives on how to support clean air through effective, efficient and enforceable approvals for various activities in communities across Ontario.

Clean Water: ONEIA member companies are quite active in the areas of water, wastewater and stormwater management, developing new technologies and approaches to address the very real threat that climate change poses in this area. Ontario is home to hundreds of thousands of lakes and rivers and these watersheds are the source of drinking water to 70% of Ontarians, in addition to being home to more than 4,000 species of fish, birds and other living things.

The Province already has strong monitoring, reporting and enforcement activities and programs related to drinking water. Fully 99.8% of more than 518,000 test results from municipal residential drinking water systems meet Ontario's strict drinking water quality standards, which are some of the most advanced in the world. This system, however, is under increasing pressure from urban development, changing weather patterns and the heavier rains that are increasingly having a damaging (and expensive) impact on public infrastructure, homes and businesses. Such events are also causing sewage and wastewater overflows into our lakes and rivers, with 1,327 bypasses reported in 2017-18. Recent research is also showing the unexpected and very negative impact of plastic entering our waterways and aquatic ecosystems through litter and through the more troubling issue of microplastics.

To this end, ONEIA would make the following four (4) specific recommendations with respect to wastewater overflows, namely:

- Encourage targeted investment and innovation in managing wastewater that overflows into our lakes and rivers;
- Increase transparency through real-time monitoring of sewage overflows from municipal wastewater systems into Ontario's lakes and rivers. This would involve working with municipalities to ensure that proper monitoring occurs and that the public is aware of overflow incidents (in this area, the Province may wish to look at the best-in-class example of the City of Kingston and its partnership with Utilities Kingston, Swim Drink Fish Canada and the W. Garfield Weston Foundation);
- Promote the use of technologies and practices to ensure water is used more efficiently. This includes water conservation planning and water use tracking and reporting; and,
- Update policies related to municipal wastewater and stormwater to make them easier to understand. We will consider how wastewater and stormwater financing could be updated to improve investment and support new and innovative technologies and practices.

The province should also consider how its regulatory regime, approvals processes and current funding streams for water-related infrastructure unwittingly make such systems more vulnerable to climate change. Ontario communities currently rely largely upon large, fixed installations and systems to purify water, treat wastewater and manage stormwater. Such facilities are vulnerable to severe weather events and are also expensive to repair and replace. Ontario water companies have developed a range of distributed, smaller systems that can address this issue but such approaches are often not factored into infrastructure and resiliency planning. ONEIA members would encourage the Province to consider how its policy, investment and approvals regimes in this area can best take advantage of a cost-efficient way to make our water-related infrastructure more resilient, creating jobs and locally-based growth in the process.

ONEIA members believe that non-point source loading to our waterways requires further focus including how we can bolster agricultural soil health to support our agricultural sectors including those surrounding Lake Erie and Lake Simcoe. We believe that nitrogen and phosphorous loadings to these waters requires further management which can be achieved through the development of soil carbon reserves. The use of organic matter found in our organic waste streams and municipal biosolids streams can rebuild these reserves, leading to higher crop yields, lower runoff of soils and reduction of nutrient flow into our waterways.

Non-point sourcing loading requires a toolbox of solutions including smart use of cover crops and improvements in manure management including:

- Establishing distribution networks to allow the nutrients to be applied on fields further away from the farms that generate the manure; and
- Developing proper storage to allow the nutrients to be applied at the correct time (4Rs) would be very beneficial from an environmental as well as economic perspective.

ONEIA agrees with the Province's commitment to continue to restore and protect our Great Lakes. We have numerous case studies that show the effective and ineffective practices that can be taken, including steps for improved nutrient management practices.

A specific example of this would be a tie-in with the Healthy Soils initiative that was outlined by OMAFRA last year. It references compost, digestates and other soil amendments such as municipal and industrial biosolids that could be useful for building soil carbon and redistributing the nutrients to locations that need them for crop production (Pg. 22 - <http://www.omafra.gov.on.ca/english/landuse/soil-strategy.pdf>). We believe that incentives could be developed such as organic by-product use tax credits such as \$10/tonne for every tonne of organics by-product used to help offset the costs for the hauling of the nutrients from the more urban areas to rural ones. Such measures complement existing supply chains and the tax credit could vary depending on the priority areas (e.g. prioritizing the Lake Erie watershed). The tax credit would be agnostic in terms of organic materials as well as use in an agricultural or industrial setting so as not to distort the market by favouring select organic products. We would also likely need to look at cost-sharing for organic by-product storage in these areas as most cash crop farmers do not have the infrastructure to manage materials that would be produced year-round and would need to be made available at appropriate times for field use.

ONEIA members agree with water conservation measures as they directly support environmental and economic goals. Our members can provide the technical know-how to support these efforts and can also play a role in municipal wastewater and stormwater management and reporting. This includes transparency and real-time monitoring of overflows and on-going investments in improvement our water and wastewater infrastructure in the Province.

ONEIA members know that approvals modernization is key to protecting Ontario's water resources. Such reforms can help identify opportunities for expedited permitting of low-risk activities that will reduce or eliminate potential issues of concern (e.g. nutrient loading and effluent discharges) and allow government agencies to focus technical and regulatory resources on the permitting of higher-risk activities.

Addressing Climate Change

ONEIA agrees that Ontario has made significant contributions to addressing climate change and can generate even more benefit for our citizens and new economic opportunities for Ontario-based businesses. The private sector is willing and able to participate in this growth in the Province as well as attracting foreign investments into Ontario and Ontario-based companies. We also agree that we can combat climate change through innovation and by reducing regulatory barriers to climate solutions.

Building Resilience: ONEIA believes that the Province needs to provide the tools to the municipalities to allow them to assess the impacts of climate change, so they can commence multi-year planning for infrastructure changes that would be required. We support the intent to conduct a provincial assessment to identify where and how climate change will influence Ontario communities, infrastructure, economies and natural environment, in addition to creating online tools, identifying adaptive solutions and demonstrating climate resilience solutions. These assessment results can then be used to guide and prioritize government policy initiatives.

We agree with modernizing the building code for residences and other buildings to include provisions to withstand severe weather events, such as flooding, as well as future planning for concepts such as organic waste diversion that require changes that were outlined in the Organics Diversion Framework.

In this area, we agree that tax policy changes have significant potential to encourage homeowners to undertake resiliency measures. The use of tax credits is an elegant way of stimulating changes on a voluntary basis and engages with individuals directly in a manner similar to the previous example of organic waste by-products redistribution.

ONEIA encourages the Province to undertake land use planning policy changes to update its direction on climate resiliency. This should include flooding, stormwater management, and other climate impacts and measures that would minimize or prevent disasters and insurance claims in the Province. This can also include land use changes to facilitate industrial developments in areas that could provide microgrids or district heating for communities.

ONEIA agrees with the Province that making critical infrastructure more resilient is a priority. This includes back-up generation of electricity and energy storage options through such measures as small-scale battery back-ups, full scale utility options (e.g. power to gas) and the production of new sources of RNG. We also support the Province in its efforts to make the agriculture and food sectors more resilient and note our previous examples to support on-farm soil and water quality programming and the implementation of best management practices.

ONEIA firmly believes that organics management is an important aspect of climate change resilience as Ontario communities have a huge opportunity to mitigate GHG emissions by addressing the issue of food waste, composting organics, and by creating or using organics management and biosolids management facilities in their areas. The GHG emission reductions from these individual and community efforts in organics management will have a positive influence on the advancement of climate change and on the Province's overall GHG targets.

ONEIA believes that approvals modernization is an important aspect of climate change resilience that Ontario can act upon by enabling permitting of infrastructure that mitigates, adapts, or build resilience to climate change, and allows communities to move forward with critical infrastructure expeditiously.

Continuing to Do Our Share: ONEIA supports the Province in its efforts to reduce emissions by 30% below 2005 levels by 2030. This has significant potential and should include focusing on priority areas such as Short-Lived Climate Pollutants (SLCPs) and the heavy-duty vehicle sectors as outlined earlier. We would recommend a more targeted approach as we are more likely to hit our targets with a focused effort on HFCs, methane (including from agricultural residuals such as manure), natural gas leaks, organic waste diversion and black carbon from forest fires and inefficient combustion devices along with the conversion of fleet related heavy-duty trucks to compressed natural gas (CNG) and RNG.

We believe that the “Path to Meeting Ontario’s 2030 Emission Reduction Target” provides a realistic means to this end, specifically focusing upon low carbon vehicles, industry performance standards, clean fuels, natural gas conservation, Ontario Carbon Trust, organics diversion and other innovative policies. In this area, organics management, resource recovery and the modernization of approvals will play a key role, including low-carbon vehicles that use RNG derived from organics or landfill gas processing, clean fuels made from organics like biodiesel and RNG, natural gas conservation actions that support use of RNG from organics, and innovations in energy storage and cost-effective fuel switching that include organics-derived fuels.

Make Polluters Accountable: While ONEIA has always been in favour of objective and well-resourced enforcement measures, we will require more information on the “polluters pay” concept as the Province intends to apply it to GHG emitters, particularly in how it intends regulate these sources in a timely manner and what types of enforcement steps will be taken.

ONEIA requests that the Province implement a broad output program that treats various industrial sectors equally and looks at the positive impact that clear regulatory signals can have on a successful long-term business environment rather than focusing on near-term protection measures for existing businesses. ONEIA has found that large emitters are willing to lower their GHG emissions but require regulatory certainty with the implementation of any programs on GHG emissions. This creates conditions that stimulate partnerships between large emitters and environment and cleantech firms to expedite GHG reductions within the province.

ONEIA accepts the idea of emission performance standards for large emitters but would recommend that these programs complement federal efforts and not duplicate them. Overlap or confusion will lead to uncertainty and thus limit movement on GHG emission reduction initiatives.

Activate the Private Sector: ONEIA believes that the emission reduction fund (the Ontario Carbon Trust) will aid in unlocking further private capital in Ontario which is required to develop technologies and solutions for climate change. While we support the launch of the fund, we would request more information be released and would recommend that ONEIA and other stakeholders with a depth of knowledge of cleantech markets participate in its design.

We recommend continued collaboration with industry to identify supply chain particulars to ensure that clean technology projects maximize goods and services from Ontario, or (as an alternative), goods and services with the lowest carbon/ESG footprint. ONEIA concurs with the Province that our private sector has the capital, capability and know-how to transform clean technology markets and transition the Province to a low-carbon economy. A prudent and responsible use of public resources to drive private sector investment will help to facilitate the private sector's best projects and ideas to drive emission reductions at the lowest cost to taxpayers.

Ontario should collaborate with the financial sector to determine how "lowest cost greenhouse gas emission reductions" would be measured and calculated in regards to the Ontario Reverse Auction parameters. This could include:

- Collaborating with the Sustainability Accounting Standards Board (<https://www.sasb.org/>) and industry to assist companies in measuring and reporting sustainability information to its stakeholders and shareholders and potential investors; and,
- Encouraging collaboration between the Ontario Securities Commission and Task Force on Climate-Related Financial Disclosures to assist in identifying key climate-change related disclosures and development of mandatory disclosure requirements (e.g. GHG emissions/reductions, ESG factors, investment risks associated with stranded assets, potential liability for future climate change related litigation, etc.).

Supporting increased corporate climate-related disclosures is consistent with the direction of the sustainable finance and investment community and is highly encouraged. Market mechanisms to encourage environmentally sustainable behaviour in the investment community require adequate data to support the correlation of environmental impacts to financial decisions.

ONEIA members would encourage the Province to ensure that the Ontario Carbon Trust considers investments in sustainable and low-GHG infrastructure a to be comparable priority to those that support measures to reduce GHG emissions. Increasing the resiliency of our infrastructure will be one of the key priorities in addressing the impact of climate change, so any investment vehicles set up by the province should demonstrate leadership and support in this area.

ONEIA contends that the modernization of approvals, resource recovery and organics management can produce a range of products (e.g. renewable fuels, alternatives to fertilizer) that can have an important role in the reduction of GHG emissions and, as a result, should be sectors where proceeds of the Ontario Carbon Trust can leverage private investments.

ONEIA members are leaders in the investment of private capital in clean technology and infrastructure and we support changes to tax codes to stimulate investments in the sector, as well as other creative measures to advance employment and business growth in clean technology in Ontario.

ONEIA would encourage the Province implement a modernization of approvals concept that allow for pilot projects to receive provisional approvals to shorten timelines to commercialization and allow for more early stage investment in the Province for innovative projects related to climate change, organics management, etc.

Use Energy and Resources Wisely: ONEIA agrees with the Province that the Ontario Energy Board (OEB) should be modernized to ensure it keeps pace with consumer and business demands as well as facilitating energy storage options that would support the reduction of the financial burden on Ontario ratepayers.

We also support the Province in the execution of the Organics Diversion Framework and encourage the Province to look at the methane released from these organics on a 20-year time horizon rather than the 100-year time horizon that is currently used. We believe that the use of the by-products from the reuse of these waste streams will lead to other benefits specifically in the agricultural sector. ONEIA will be submitting a follow-up document to this submission that outlines more specifics related to organics diversion and other resource recovery projects.

ONEIA supports increased access to clean and affordable energy for families including the connection of Indigenous communities in Northern Ontario, the utilization of lower carbon fuels including ethanol, biodiesel and RNG and the use of heat pumps and district heating. Furthermore, we support the implementation of a voluntary RNG use program by businesses and homeowners. Such a program would allow individuals to play a role in the adoption of this fuel from landfills, wastewater treatment plants, farms, anaerobic digestion of food waste, the utilization of surplus renewable electricity through Power to Gas, and biomass gasification.

ONEIA supports tax policy options that encourage homeowners to adopt energy efficiency measures. Regarding other policy measures that would be beneficial to business, we would suggest property tax abatements, accelerated depreciation, pooling of financial assurance for waste sites, etc.

ONEIA agrees with the Province that there is a need to encourage the wise use of energy and resources and that development of “made-in-Ontario” solutions to opportunities will save energy, resources and money, as well as protect our environment and help address climate change.

We believe that a transformation of energy use in the transportation sector, as well as conservation measures or alternative practices for residential and ICI energy and heating, will play a key role in GHG reduction and climate change resilience.

ONEIA supports the establishment of a circular economy that is supported by a sustainable materials management systems approach to using and reusing materials more productively over their entire life cycle. By taking a holistic approach to the lifecycle of products and packaging, a sustainable materials management framework compliments a circular and sustainable economy.

Toward this effort, ONEIA recommends the following key principles which support the application of resource recovery in the Environment Plan and should be considered as a guide in supporting waste prevention and in maximizing the benefits of resources generated in various waste streams, as part of a broader advanced resource recovery framework:

- Reduce waste and emissions is the first objective of any system. Supporting the prioritized end-of-life applications should be based upon such key priorities as reduction, reuse, recycling and recovery;
- Manage the waste resources remaining in a sustainable way by minimizing the economic (i.e., affordable systems) and environmental (land, water and air pollution) burdens associated with the waste and resource recovery systems;
- Recognize that “Life Cycle Considerations” to managing waste resources sustainably are critical to achieving the reductions needed to minimize economic and environmental burdens. The application of treatment options after source reduction should be guided by science-based “Life Cycle Thinking” and a hierarchy of technologies starting with traditional/conventional and then moving on to advanced technologies that produce products of value;
- Establish a waste resource recovery system objective to recover and produce the highest possible value product for use in the economy, using the best available technologies that also protect the environment;
- Establish principles that recognize local, regional and provincial jurisdictions’ needs and ensure that these measures are not prescriptive nor pre-determine resource recovery systems for these jurisdictions;
- Have the appropriate target(s) that will define the end goal(s) and how to achieve them;
- Remain open to new, innovative ideas, encouraging flexibility that permits bridging and transitioning to new technologies and systems as the foundation and commitment to continuous improvement;
- Validate new technologies to ensure they are economically, environmentally and socially sustainable;
- Streamline the approvals system to facilitate pilot and commercial-scale technology installations through a timely, clear, standardized, and modern approvals process;
- In the overall approach, set “winning conditions” rather than picking “winners and losers”; and,
- Support and incent the domestic development of new technologies, markets and infrastructure to ensure their sustainability.

Doing Our Part – Government Leadership: The barriers to effective information sharing and collaboration within government and between ministries have been a serious barrier in the past to effective environmental regulations and policy outcomes. Therefore, ONEIA supports the action to make climate change a cross-government priority and supports the Governance Framework that is being considered along with the establishment of clear responsibilities/ requirements for ministries to track and report on climate change measures. We also believe that the Province should bolster their green procurement practices as they can be a leader in the adoption of new technologies as well as good and services in this area.

A key method to encourage broad-based leadership is to empower local municipalities to develop climate and energy plans for resiliency and transformation that are specific to their respective areas. This would also include local procurement required through organic waste regulations for compost and digestates.

ONEIA believes that governments at all three levels can use their existing procurement programs to stimulate end markets for resources that are currently considered waste and create pull for these materials which in turn can stimulate the development of a broader circular economy.

Reducing Litter and Waste

ONEIA agrees with the Province that waste generation has not decreased over time and that we will need to refocus our reduction and reuse efforts. This will include recycling of materials through the Blue Box as well as organic waste from our residences, businesses and institutions. Technologies are readily available in these areas but will require political and policy commitment to implement the changes that are required to allow these programs to flourish.

ONEIA companies offer the following specific recommendations and observations:

- ONEIA has supported the Province in its efforts to divert waste from landfills as well as the utilization of existing infrastructure and new technologies that are available to process these discarded resources. Similar to other jurisdictions across North America, Ontario is experiencing issues with respect to waste diversion and recycling including the concept of the 'evolving tonne' whereby there has been a shift in the composition and source of materials that has resulted in a reduction in waste diversion rates. Given the concept of the evolving tonne, there have been calls from stakeholders along the materials chain of custody to move from weight-based metrics to a life-cycle analysis. Using established and accepted methodology by the U.S. EPA, the life-cycle analysis is a better measurement of environmental impacts and benefits which better articulate how recycling drives GHG reduction and energy savings.
- ONEIA members agree that the Province and its municipal partners have worked collaboratively to divert waste from homes but that further work is required as many communities have not yet implemented diversion programs. We also agree with the Province that the industrial/commercial/institutional (ICI) sectors are lagging in these areas and require a push/pull from the Province to stimulate diversion of food waste and organics that are currently going to landfill. We believe that this is lost opportunity and could stimulate growth in the Province with new infrastructure. As an example, ONEIA estimates that \$500-million to \$1-billion is required to construct the necessary organics processing infrastructure that would be required to process the additional food waste and organics that is not currently being processed as well as over \$150-million in recurring operational costs that would be required to sustain these facilities annually. With the proposed changes to streamlining approval processes, this will incent the private sector to invest in appropriate processing facilities, thus, driving over \$3 billion in economic activity over a 20-year period. The diversion of this organic waste will

reduce GHG emissions, lead to new investment in jobs and infrastructure, and yield significant climate, economic and public health benefits by 2030.

- ONEIA believes that the Province does require additional landfills and thermal treatment infrastructure for those waste streams that cannot be diverted for a higher value recovery but should actively seek to encourage markets for those elements that can be effectively diverted from the waste stream.
- ONEIA supports a full extended producer responsibility (EPR) program that would engage the producers of products that are produced or sold in Ontario in how their wastes are managed. We need producers to ensure that the full life-cycle of their products is understood and managed appropriately by them. However, ONEIA would caution that the wholesale application of EPR on the industrial, commercial and institutional sector may not be applicable and that a sector-by-sector review (i.e. multi-family residents, construction and demolition, retail, etc.) is more appropriate.
- ONEIA supports the reduction and diversion of food and organic waste from households and businesses. We would agree with expanding the green bin program to Tier I cities in the Province as well as relevant businesses.
- ONEIA does not support a ban of food waste from landfills as it would make our landfills uncompetitive with US-based landfills but would support a policy that diverted organics from the various large food waste generators in the Province through our transfer stations for beneficial reuse. We do support other measures that have been outlined including public awareness/education and utilizing foods that are underutilized before they become waste.
- ONEIA supports the Province in the reduction of plastic wastes and believe that the Province should continue efforts to work with other provinces, territories and the federal government to develop a plastics strategy to reduce plastic waste and limit microplastics that can end up in our lakes and rivers. We have provided previous correspondence with the Province and federal government on this matter and have reattached our feedback for your consideration. This includes the implementation of national standards for recyclability and labelling.
- ONEIA supports the Province in its efforts to increase the number of Ontario residents and business participating in waste reduction efforts and making producers more responsible for the waste generated from their products and packaging. We have also outlined our comments on opportunities to recover the value of the resources in waste and would encourage the Province to review the hierarchy of utilization that has been adopted by many jurisdictions. Such areas include resource recovery technologies along with encouraging reduction, reuse and recycling. Regarding compostable products, we believe that these materials should play a role in supporting diversion of organics, but further dialogue is required about acceptable materials in these programs to ensure that the end products are usable and do not cause issues with agricultural use of the compost and digestates from the organics processing infrastructure.
- ONEIA believes that the Province should review the Nutrient Management Act (including odour classifications for land application) and the science that supports the

rules surrounding these regulations to ensure it properly covers the existing circumstances and by-products.

- ONEIA is amenable to municipalities being engaged as stakeholders in waste disposal and processing infrastructure siting. However, it is important to understand that municipalities are already entrenched as an official reviewer and commenting agency in landfill Environmental Assessment processes through the MECP's *Codes of Practice for Preparing and Reviewing EAs in Ontario*. Providing municipalities the legislative ability to refuse siting of landfills would usurp the authority currently held by the Province and undermine the purpose of the EA process. It will contradict the Province's mandate of reducing red tape by adding another government layer of approval to a process that is already arguably too long. Additionally, it will exacerbate the likelihood of a waste disposal capacity crisis in Ontario, which would hamper business operation and obstruct the Government's "Open for Business" mandate.
- Additionally, beyond the issue of landfill siting, the Province needs to ensure that municipalities will not preferentially favour their own assets over the private sector. We require transparent rules surrounding permitting a site of this type of infrastructure and support actions that are outlined in the Organics Diversion Framework for standardizing designs and proper land use planning. As an example of land use planning, we would suggest looking at the existing provincial policy statement regarding land uses and consider how organics processing facilities could fit into the agriculture-related use portion. It would likely tie well into minimum distance separations (MDS) and the Nutrient Management Act (<http://www.omafra.gov.on.ca/english/landuse/facts/permitteduseguide.pdf>). We understand that the Province may revisit this for a municipal perspective in the Organic Waste Diversion framework, but we expect that we would have an overlap with the Provincial Policy Statement attached above. We believe that the Province needs to provide guidance to smaller rural communities that would be good candidates for facilities and have found that M1 and M2 zoning could fit well but currently they have exclusions for allowing this type of infrastructure.
- ONEIA believes that further development of a robust system of diversion and residuals management is a necessity to adequately manage and use our discarded organic and non-organic resources, and to better manage excess soils and drive utilization of brownfields for a higher and better development purposes.

Brownfields redevelopment and clean soil

ONEIA believes that encouraging redevelopment within urban centres will increase population and economic growth within areas that already have infrastructure and transit in place to support that growth. It will also decrease growth pressure on commuter communities and ultimately limit congestion on our roads and the increased GHG emissions that come from commuter-related transportation.

Increasing urban density faces a major barrier, namely that repurposing former industrial or commercial spaces (or brownfield redevelopment) currently occurs under a cumbersome regulatory process. The development involves a detailed permitting process (e.g. obtaining a Record of Site Condition [RSC]) that entails uncertain timelines and risks that prevent urban

redevelopment and lead developers to see reclaimed urban spaces as fewer desirable options. Therefore, considerable opportunities for environment firms and entrepreneurs in this area. This can lead to increased economic development and better environmental outcomes with respect to the Environment Plan.

ONEIA has been supporting the redevelopment of brownfield spaces under Ontario Regulation 153/04 since its inception in 2004 (prior to 2004, the industry was supporting brownfield redevelopment under the guidelines in effect as of 1996). It has evolved into innovative approaches and technologies that address the areas of site investigation, risk assessment, risk management and remediation processes that then allow brownfield sites to be safely redeveloped. While the technology exists to continue to support the redevelopment of these sites in a cost-effective manner that is protective of human and ecological health, we require specific changes in regulations, policies and approaches to make this happen, namely:

- The current proposed amendments to Ontario Regulation 153/04 will greatly reduce the burden and uncertainty associated with getting an RSC in place to support the redevelopment of these sites; in particular, the variance on full delineation for risk assessed sites and the modifications to the regulation related to salt impacts associated with winter safety are important burden reduction measures that should be put into force as soon as possible;
- MECP's current approach to addressing soil that has a pH outside the "accepted" range should be revisited; options beyond additional sampling to average out values (not always practical), soil removal (which generally promotes unnecessary soil movement activities), or application of Table 1 Standards (prohibitive for delineation and increases redevelopment costs due to soil importation requirements) are needed. In many cases, this approach leads to soil removal to avoid application of Table 1 – even if there is no evidence that the locations with soil pH outside the allowed range are causing issues at the site or the pH issue is extensive. The regulation should leave open options that would allow for more soil to be left in place if there is a good technical rationale to do so. Blanket rules that encourage the removal of soil without any technical consideration don't really align with the MECP's goal of preventing unnecessary movement and unnecessary landfilling of soil;
- MECP should reconsider the blanket requirement for RSCs on upper floor levels of existing high-rise buildings when they are converted from commercial to a more sensitive use. Vertical spaces that are not in contact with the ground surface and may be individually owned have specific challenges for obtaining an RSC, including access to sampling at ground level. Perhaps the requirements for obtaining an RSC should be specific to spaces that are in contact with the ground surface since it is only these spaces in which access to subsurface contamination can truly be controlled; and,
- MECP's recent redefinition of volatility is problematic as it leads to the inclusion of multiple parameters as "volatile" that cannot truly be measured in the vapour phase and would not be expected to be observed in the vapour phase. The inclusion of these additional parameters as "volatile" could easily mean significant added costs to the brownfield redevelopment program as it will necessitate multiple additional sampling

apparatuses and processes under Certificate of Property Use (CPU) monitoring programs for potential inhalation risks. The MECP should reconsider the validity of the revised definition and evaluate whether the extra level of protection introduced by this new definition actually adds value to the process (i.e., are we truly improving our protection of receptors by applying this definition), or just increases the cost burden of the process for no discernable gain.

ONEIA welcomes the Province's attention to Brownfields and Soils issues in the context of the overall Environment Plan, noting that it builds on the progress Ontario has made over the past five years with respect to establishing expectation and a draft regulation around the issue of appropriate management of excess soils. Collaborative efforts by ONEIA and the Ministry have begun to allay public concerns about illegal dumping and/or misrepresentation of the quality and safety of excess soils and the Environment Plan offers the opportunity to continue this work. We are particularly pleased to see the commitments on pages 44 and 45 of the Environment Plan with respect to excess soil and understand that the proposed Excess Soil Regulatory package can be released for implementation in the near future.

It is ONEIA's opinion that the Excess Soils Regulatory package has wide stakeholder support. These stakeholders (and ONEIA has engaged from the beginning) strongly support the release of the Regulation at the earliest opportunity, given the assumption of a fair transition period of up to three years for its more complex aspects. Such an implementation would offer a significant opportunity to reduce "red-tape" and to streamline the excess soil implementation system.

With this in mind, ONEIA believes there are five remaining areas where details need to be confirmed with respect to how the new regulation would be implemented and applied:

Enforcement: Under the new definition, Excess Soil is classified as a "waste" unless the management procedures outlined in the proposed regulation are fully followed – a process that Ontario stakeholders need to better understand. Proper enforcement of the regulation will be key in establishing public confidence in the program as well as acting as a potential deterrent to those who would consider violating the standard. Further, identifying who will be responsible for enforcement, making enforcement easy to administer, and ensuring that enforcement is heavily punitive so as to act as a deterrent will be keys in the enforcement aspects of the Proposed Excess Soil Regulation.

Clear Responsibility: As the proposed regulation generally places responsibility for ensuring the quality and appropriate use of the excess soil on the generator, we will need further clarity on responsibilities for monitoring the program and identifying potential issues. A clear and consistent understanding, as well as effective and consistent communication, is needed between the local level representatives from municipalities and conservation authorities in collaboration with the MECP.

Simple Registration Process: Qualified Persons (QPs) will benefit from a simple on-line registration platform. Comparators would be Ontario's Hazardous Waste Information Network (HWIN) system and the Environmental Activity and Sector Registry (EASR) process. Such a system would not require every detail with respect to the site/transaction but merely those required for monitoring and enforcement. Mandatory linkages for both generator sites and receiver or reuse sites to access the registry should be developed to ensure any loops can be closed and the ultimate destinations for excess soil can be tracked and recorded. Further, limiting the ability to modify information posted to QPs (similar to filing an RSC) with appropriate certifying statements by the project QP and the project leader (defined as possibly the owner, developer, constructor, general contractor etc.) would provide assurances for the integrity of the registration site. Modest registration fees based on expected excess soil tonnages would cover the costs of administering and maintaining the online registration platform and database.

Qualified Person's Reliance: The proposed regulatory package relies heavily on Ontario's Qualified Persons, necessitating a QP registry process that will allow for identification, tracking and communications, as well as possible enforcement. Further, mandatory training and education programs need to be established for QPs to achieve and maintain their designation, but more importantly, to ensure a high and standardized level of practice in excess soils management in addition to site assessment and remediation. The program could be administered through an existing provincial body with partnerships with the two base Regulators of QPs (PEO/OSPE and APGO). Registration of the QPs would provide a streamlined process for any enforcement and the registry database. Modest registration and annual fees for the QPs would cover the costs of administering and maintaining the QP registration program. Further, "pay-for-use" certification and training programs would assist in cost-recovery.

Promotion of Local Reuse: Promoting (and incentivizing) local reuse of excess soils will reduce truck traffic, long distance haulages and wear-and-tear on roadways, with commensurate positive impacts on reduced GHGs. Soil banks and fill campuses established by private industries and/or public-private partnerships with municipal governments could assist in the local reuse opportunities. As an example, establishing soil banks and excess soil processing sites in existing and closed aggregate quarries and pits would allow for these often-underutilized facilities to be used for a higher purpose. Further, these facilities have established truck traffic plans and often could provide full two-way loads (excess soil to the quarry and aggregates out of the quarry), creating transportation efficiencies for the existing truck traffic and reduction of the overall GHGs produced. Ensuring that the "red-tape" surrounding proposals is reduced will be key to promoting local reuse.

In addition to the points listed above, ONEIA strongly recommends that efforts to support innovation should continue and increase. Innovations surrounding beneficial reuse opportunities and procedures will prove important. It is expected that the total mass of excess soil generated is currently greater than potential reuse opportunities, creating an opportunity for new beneficial reuse. Further, there will be new opportunities to use excess soils that may

not be geotechnically suitable for structure support (i.e. buildings, roads etc.) to ensure that these soils are not deposited in a non-beneficial manner. An example would include promoting business opportunities for combining hauled sewage, organic compost and geotechnically inadequate excess soil to create new productive top-soil and/or soil amendments. Locally established processing sites would assist with dealing with these materials while minimizing long-distance hauling and the associated GHGs emissions.

Conserving Land and Greenspace

We concur with the Province that Ontario's natural environment is a resource for all our citizens, and consequently that proper land use and infrastructure planning can play a crucial role in climate change mitigation, adaptation and resilience in the Province. We believe that government, business and citizens all have interests and responsibilities in building resilience in the natural ecosystems, and that collaboration between various stakeholders in conserving land and greenspace is fundamental to our nature as Ontarians.

ONEIA asserts that approvals modernization can support best management practices within resource recovery, agriculture, bio-solids, organics, forestry and other sectors, and that these permitting enhancements would improve land management, derive the highest and best use of our resources, and conserve land and greenspace. We also believe that measures to support best management practices in agriculture, as well as priority measures focused upon biomass management in our forests, are very important to land management in the Province, and that the highest and best use of our organic resources to achieve these ends is critical.

ONEIA has outlined measures to support agricultural best management practices as well as priority measures focused on biomass management in our forest to address short-lived climate pollutants such as black carbon that are generated via wildfires. Ontario is a leader in sustainable forestry management and should continue to show as a leader in this area. However, we do not always use these biomass resources in the Province and often export them (in a lower added-value format) to international markets. Further work should be done to consider how these resources could be utilized in the Province or whether the international markets are the best suited to utilize the products and thus allow the Province to tout the environmental and economic benefits of these outcomes.

Summary

ONEIA looks forward to working with the Province to implement the "Made-in-Ontario" Environment Plan and to participating in consultations on the priorities and next steps. ONEIA member companies and their representatives are willing to participate in advisory panels on the Environment Plan and specific subjects (e.g. resource recovery, climate change, organic management, low-carbon fuel, modernization of approvals and clean technology) as they relate to public and private facilities and infrastructure. ONEIA believes it has identified the aspects of greatest importance and priority within the Environment Plan and areas where our member companies can provide the most support in ongoing measurement and reporting of progress. ONEIA believes that time is of the essence and we will collaborate with the Province in an

expeditious manner with respect to advancements of actions identified within the Environment Plan.

We welcome the opportunity to discuss our ideas further. Please contact Alex Gill, our Executive Director, at agill@oneia.ca or at (416) 531-7884 should you have any questions.