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ANDSOOHA – Public Health
Nursing Management in
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Association of Ontario
Health Centres

Association of Supervisors of
Public Health Inspectors of
Ontario

Canadian Institute of Public
Health Inspectors (Ontario
Branch)

Community Health Nurses'
Initiatives Group (RNAO)

Health Promotion Ontario

Ontario Association of Public
Health Dentistry

*Charitable Registration
Number 11924 8771 RR0001*

March 28, 2015

Ms. Kathy Hering
Senior Policy Analyst
Ministry of the Environment and Climate Change
Climate Change and Environmental Policy Division
Air Policy and Climate Change Branch
77 Wellesley Street West, 10th Floor
Toronto Ontario, M7A 2T5

RE: Environmental Bill of Rights Registry Number: 012-3452

Dear Ms. Hering,

The Ontario Public Health Association is pleased to see the significant focus that the Ontario Government is placing on climate change mitigation and adaptation. We agree with the message from the Minister of Environment and Climate Change in Ontario's Climate Change Discussion Paper 2015 that "climate change is the critical issue of our time". We also firmly believe that climate change is the critical public health issue of our time. To quote Dr. Margaret Chan, Director-General from the World Health Organization, "...every century has its public health challenges and climate change is our century's challenge".

Created in 1949, the Ontario Public Health Association (OPHA) is a not-for-profit organization committed to providing leadership on issues affecting the public's health and strengthening the impact of people who are active in public and community health throughout Ontario. Our mission is achieved by providing professional development timely information and analysis on public health issues, access to multi-disciplinary networks, advocacy on healthy public policy and expertise and consultation.

The health impacts of climate change are broad and well established – from extreme weather events to changes in vector and water-borne diseases; climate change has the potential to impact acute, chronic and infectious diseases. Furthermore, there will be particular groups that will be most vulnerable to these health impacts including seniors, children, marginalized adults and those with chronic conditions.

Preventative risk reduction around climate change requires adequate knowledge of anticipated health risks, ensuring equitable access to protective measures and adaptive capacity. Public Health Units across Ontario are at various stages of developing plans to address climate change, with some having developed comprehensive plans, including a health equity lens on vulnerable populations.

With a mandate under the Ontario Public Health Standards to increase awareness of climate change health impacts and manage health hazards, the public health sector plays an important role in ensuring climate resiliency as well as identifying and mitigating community vulnerabilities.

OPHA is supportive of the Ministry of Environment and Climate Change's leadership in addressing climate change. We were encouraged with the commitment expressed by Minister Murray, during our January 19, 2015 meeting, to work on solutions to climate change. Given the potential for severe health impacts, we are pleased to see that the Province has placed a focus on climate change with the newly named Ministry of the Environment and Climate Change.

We are also encouraged that the Climate Change Discussion Paper recognizes the opportunities for climate change mitigation and adaptation across all sectors including industry, transportation and community planning. Ontario has the opportunity to be a leader in the green economy and healthy built environments by encouraging low-carbon technology, planning complete communities and supporting sustainable transportation systems that reduce reliance on fossil fuels which contribute to greenhouse gas emissions. The health co-benefits include better air quality, reduced urban heat islands, increased community resiliency, increased physical activity, general wellbeing and lower health care costs.

OPHA agrees with the Ministry's guiding principles for achieving a low carbon economy. With respect to the guiding principles of collaboration, leadership, action-oriented and scientific, we believe that the climate change strategy must:

- Identify public education and outreach as key objectives to increase awareness of actions to reduce GHG emission. It is important to have a comprehensive, clear and coordinated communication campaign that demonstrates the health, environmental and economic benefits of our climate change actions as well as the consequences of inaction. OPHA is interested in working with the Ministry of Environment and Climate Change, the Ministry of Health and Long Term Care, local public health units, and other partners to communicate the urgent need for action to address the health impacts of climate change and to provide tools for communities and individuals to reduce GHGs and adapt to climate change impacts.

- Emphasize cross-sector collaboration across all provincial and federal ministries, local governments, and other stakeholders in the areas of outreach and education, mitigation and adaptation, resilience and capacity building, climate modelling, flood plain and flooding mapping, information and data sharing and best practices.
- Include a regulatory policy framework across all provincial ministries in order to reach greenhouse gas (GHG) emission targets. For example: consideration of climate change impacts: in all Provincial policies (e.g. Greenbelt, Growth Plan, Planning Act); regulatory reviews; and in all government business plans and reports.
- Consider the contribution of nature and green infrastructure to climate change mitigation and adaptation through further research in order to better protect ecosystems and human health.

OPHA is pleased to provide the responses outlined in the following pages to the discussion questions posed by the Ministry.

We are encouraged that the Provincial Government is taking action to mitigate the impacts of climate change, seeking opportunities for collaboration across all sectors and starting to prepare our communities and citizens for the climate change impacts by reducing risks and increasing resiliency.

We welcome the opportunity to work with the Ministry of Environment and Climate Change, the Ministry of Health and Long Term Care and other key stakeholders to assist in this endeavor

Thank for your consideration and the opportunity to comment.

Yours sincerely,



Pegeen Walsh
Executive Director

Responses from the Ontario Public Health Association to Consultation Questions from the Ontario Ministry of Environment and Climate Change

Traditional Knowledge

What are the best ways to employ the traditional knowledge of First Nations and Metis communities?

As First Nations, Metis and northern communities will be ones most vulnerable to the impacts of climate change, it is vital to include their knowledge and provide them an opportunity to participate in the development of a climate change strategy. The Provincial Government has experience in engaging First Nations and Metis on many projects and should utilize these skills to both share the latest climate change science and learn from traditional knowledge on our changing climate. It is important to use facilitators that have experience in engaging First Nations and Metis, and make a concerted effort to be inclusive of all groups in developing a climate change strategy that will ensure fair and equitable actions.

Actions in Key Sectors

What can each of the key sectors including transportation, industry, buildings, electricity, agriculture, waste and forestry do to contribute to Ontario's 2020 and 2050 targets?

As mentioned above, with a mandate under the Ontario Public Health Standards to increase awareness of climate change health impacts, the public health sector plays an important role in ensuring climate resiliency as well as identifying and mitigating community vulnerabilities. Public health units conduct surveillance of climate-related health risk factors and health outcomes such as vector-borne diseases, extreme heat events, and contaminants in both drinking water and recreational waters such as public beaches. This data, along with that collected by other agencies, can be used to monitor trends, increase awareness and support climate change adaptation.

Public Health can contribute to education and outreach efforts on reducing vehicle use and home energy use, and the associated emissions of greenhouse gases and air pollutants. Many public health units currently support the Ecoschools 20/20 The Way to Clean Air program whose goal is to reduce emissions in these areas. Active and Safe Routes to School is another program promoted by Public Health to reduce emissions of air pollution and GHGs and increase physical activity.

Public health also plays an important role in identifying the linkages between health and the built environment and working with municipalities to support healthy community design and transportation systems that address both climate change mitigation and adaptation. With the formation of the provincial table "Healthy Environments – both Natural and Built" the Ministry of Health and Long Term

Care has acknowledged this important linkage by bringing together stakeholders in public health, planning, transportation and academia to develop tools to support healthy community planning including climate resiliency.

Adaptive measures to increase resilience to climate change are important, but will not be sufficient on their own. As noted by the Ministry, addressing climate change requires a strong focus on reducing greenhouse gas emissions to prevent further climate change. The Government of Ontario transformed the electricity sector by eliminating coal-fired power generation. It is necessary to similarly transform other sectors in order to adequately mitigate climate change. When sectors are transformed using strategies that reduce the consumption of fossil fuels, reductions in GHG emissions are accompanied by improvements in air quality and health benefits.

While all sectors must continue to move forward on environmental and sustainability practices, some opportunities in key sectors are highlighted below. Additional details are provided in our responses to questions later in this submission:

- **Transportation:** Prioritize active transportation and public transit over single occupancy vehicle use; provide infrastructure for electric vehicles; further innovating on zero emission vehicles and alternative transportation fuels.
- **Forestry:** Require mandatory canopy cover targets for municipalities; quantify and communicate the benefits of forests and other ecosystem services in addressing climate change mitigation and adaptation.
- **Buildings and Community Planning:** Promote and support Leadership in Energy and Environmental Design (LEED) and LEED for Neighbourhood Development (ND). LEED ND certifies neighbourhoods that exemplify mixed use, walkable streets, compact development, green-infrastructure, on-site renewable energy sources and solar orientation that addresses both climate mitigation and adaptation.
- **Waste:** Support municipalities in achieving 'zero waste' goals and promoting programs to reduce food waste.
- **Agriculture:** Support local food initiatives and research on the economic and environmental benefits of a local, low-carbon food system.
- **Industry:** Investigate mechanisms to implement requirements for reduced/recyclable packaging and promote toxics reduction; the "big-emitters" sector can be leaders in the low-carbon economy by investing in technologies that reduce reliance on fossil fuels and other finite natural resources.

What can government better do to encourage industry to further innovation to reduce emissions?

Invest in green technology and incentivize industry to research and implement technologies that reduce emission of toxic substances and greenhouse gases. Look at all regulatory opportunities (e.g. Toxics Reduction Act) that can contribute to GHG emission reductions.

What role should land use planning have in affecting Ontario's boreal carbon storage?

Using land use planning tools, complete communities can be developed which integrate green space and natural heritage features to reduce the impacts of development on our natural systems. Public health recognizes the value and multiple benefits of green spaces and other natural systems as they help to improve air quality and mitigate climate change impacts. Forested areas and green spaces contribute to carbon sequestration and storage, provide shade from heat and help buffer against the damaging effects of flooding during storm surges.

As further explained in the transportation section below, creating compact complete communities has multiple economic as well as health benefits. Compact communities reduce reliance on automobile use which is associated with economic costs related to traffic congestion, lost productivity and health care costs. (The health impact of traffic-related emissions in the GTHA is estimated to be over 700 premature deaths each year, with an economic impact of over \$4.6 billion. – *Improving Health by Design in the Greater Toronto-Hamilton Area - 2014.*)

What role should the issue of Ontario's food supply play?

The strategy should focus on increasing local food production to improve resilience and food security. Supporting local food production and procurement decreases emissions associated with long distance transportation of food. Access to a dependable and affordable supply of nutritious food also contributes to people reaching their full physical and mental potential, and lowering their risk for chronic diseases. It is important to protect the Greenbelt and other agricultural lands that are close to the urban markets.

According to the 2015 report – *Dollars and Sense: Opportunities to Strengthen Southern Ontario's Food System*, our transportation system and local food system are closely tied. Less imported produce translates to reduced transportation emissions and reduced environmental impact. Replacing a percentage of fruit and vegetable imports with Ontario grown produce would have environmental and economic benefits. The report examined a number of scenarios such as a 10% reduction in the top 10 fruit and vegetable imports, citing that "Transportation emissions due to these commodities would decrease, with CO2 production, for example, falling by 59% (or 12,200 tonnes). The largest savings would be due to shipping fewer apples, field and greenhouse tomatoes, and carrots." The report

identified that “Increased local production to offset the 10% reduction in imports of fruits and vegetables could result in an additional \$242.5 million in provincial GDP and an associated 3,400 FTE jobs.” More research is needed on the value of a local, less carbon-intensive food supply from both an environmental and economic perspective.

How can Ontario best achieve emission reductions in the transportation sector?

Reducing transportation emissions has multiple health benefits in addition to the obvious reduction in GHG emissions. According to a 2014 report of Medical Officers of Health in the Greater Toronto-Hamilton Area (GTHA) – *Improving Health by Design in the GTHA*, the health impact of traffic-related emissions in the GTHA is estimated to be over 700 premature deaths each year, with an economic impact of over \$4.6 billion. Traffic-related emissions are also estimated to be responsible for over 2,800 annual hospitalizations due to heart and lung conditions. The same report noted that implementing a regional transit system such as Metrolinx’ The Big Move, would prevent approximately 154 premature deaths due to transportation related air pollution each year, with an economic impact of \$0.8 billion.

In order to accrue the multiple public health benefits of sustainable transportation, transportation systems need to be well-connected, efficient, economical, and equitable and provide reliable transportation. It is important to:

- Consider incentives for the public to choose alternate and low carbon forms of transportation. Substantially higher investments in public transit infrastructure need to be improved over the short and long term to shift the reliance from vehicles to sustainable transportation measures.
- Consider improved incentive mechanisms for energy efficient vehicles (e.g. tax credits).
- Require public and private sectors to have mandatory Transportation Demand Management (TDM) plans, encourage employers to consider formal telework and carpooling policies and work with organizations to implement TDM practices (e.g. Smart Commute).
- Investigate opportunities to reduce vehicle idling – through education, engineering and enforcement.

The unique transportation challenges in rural areas must be taken into consideration when developing sustainable low-carbon transportation options. Where public transit is not feasible due to economies of scale, creative solutions should be implemented. For example, blended transportation systems that incorporate school bus travel with the transportation needs of aging populations.

What are the barriers to uptake in low-emission, zero-emission and electric vehicle use in Ontario?

Affordability, availability, lack of investment in innovative technology, uncertainty regarding reliability of new technologies, lack of incentives and limited supportive infrastructure (e.g. charging stations)

are barriers to the uptake of low emission vehicles. Transportation related incentives to intensify efforts to get non-emitting vehicles on the road, and ensuring solar and plug-in ready homes should be a priority alongside investments in transit, including rapid transit infrastructure.

Another way to increase the uptake of low-emission vehicles is to create awareness of the costs and benefits (financial, health and environmental) associated with fuel efficient vehicles compared to gas-guzzlers. The gas-pump sticker campaign by Our Horizons is an example of a low cost high impact campaign to increase awareness of the impacts of the burning of fossil fuels and its link to climate change and human health.

Communities and Built Form

What role could the Growth Plan for the Greater Golden Horseshoe and other planning mechanisms play in stabilizing the growth in transportation and building emissions?

Planning tools can promote and direct the development of transit-oriented communities which reduce vehicle-kilometres-travelled and associated emissions of greenhouse gases and local air pollutants. Transit supportive development also supports active transportation, reduces exposure to air pollutants, promotes physical activity, supports multi-modal trips and reduces traffic casualty rates.

It is important to:

- Provide sustainable modes of transportation (e.g. public transit, carpooling, cycling and walking) that are accessible and available with supportive infrastructure (e.g. bus bike racks and shelters).
- Provide incentives to municipalities to plan walkable and transit supportive communities. Consider changes to the Development Charges Act to require funding for TDM measures in all development applications.
- Review planning mechanisms to address the issue of previously-approved development plans (i.e. “grandfathered”) being allowed to remain approved under outdated legislation.
- Recognize that housing affordability and high real estate costs directly impact transportation decisions (i.e. distances between homes, businesses and amenities result in longer commutes, lack of integrated public transportation, high cost of public transportation versus personal vehicles).

Planning our communities to be more resilient and sustainable will help them prepare and adapt to climate change impacts (e.g. extreme weather events). We support updates to the building code and other planning policies to further encourage uptake of development standards and landscaping features that reduce energy and water use while incorporating natural and built shade to reduce exposure to extreme heat and UV rays.

What changes are need to building codes and planning processes to ensure greater uptake with regard to geothermal, solar, wind, natural light, combined heat and power, community energy and other emerging technologies?

Incorporate building design criteria from Leadership in Energy and Environmental Design (LEED), LEED for Neighbourhood Development, Energy Star and other energy conservation standards into the Ontario Building Code to address both climate mitigation and adaptation. Allow demonstration projects for emerging energy efficiency technologies that are not feasible under the current Building Code, in order to spur research and innovation.

Consider providing a robust system of incentives and rebates to support home owners' energy conservation efforts. Consider examples such as the Halifax Solar City program which supports home owners to install solar water heating systems. While building codes can improve energy efficiency for new homes, much can be done to improve and retrofit older homes to better conserve and use less energy.

Does Ontario have the skill base to build and operate "green" buildings and communities, and if not, what more can be done to train the appropriate expertise?

Increased focus should be placed on technology for green roofs and other building features that help with both mitigation and adaptation. Potentially some of the green roofs could be used to expand access to urban agriculture. The government should fund demonstration projects to show the private sector that green roofs are effective and economically feasible.

With green technology rapidly changing and improving, it is important to develop and implement training programs for the building sector. This is a significant economic opportunity for the education sector and the building sector, as well as the private and public sector.

How can emissions from the existing building stock be reduced?

Develop programs or incentives for homeowners and businesses to improve their energy use. Specifically low/no-cost programs, tax benefits or rebates for more energy efficient materials and appliances. This could be tied to carbon pricing. Evaluate what low-cost, "low hanging fruit" is available to encourage homeowners to retrofit.

What more could be done to ensure Ontarians have the capacity to invest in low-carbon buildings and technologies?

Micro-FIT and Small FIT regulations need to be changed to make purpose built Solar Canopies with EV charging eligible for the program. This would spur private sector investment in infrastructure.

It is important to support small businesses and local community groups by building community awareness and main-streaming low-carbon buildings and technologies. The Province could sponsor community workshops on technologies such as solar installations, straw bale design and small wind projects.

Public awareness needs to be increased to facilitate adoption of electric vehicles powered by renewable energy. Solar canopies with EV charging that are set up in public places like universities, government facilities and transit parking lots are perfect locations to showcase this technology.

Several municipalities are showcasing low-impact development demonstration projects such as rain gardens and other stormwater retention technologies. Providing the training and tools to install and maintain these small scale systems can go a long way to increasing the resiliency.

How can Ontario communities' best determine their local vulnerabilities and risks, engaging local leaders in government, First Nations and Metis communities, and the private sector?

Provide standardized vulnerability assessment tools to municipalities and key sectors to determine these risks and areas of opportunity. Share data and tools with stakeholders and provide training in the use of these tools, in order to help communities identify and prioritize climate adaptation actions. Vulnerability assessment tools must be comprehensive and evidence-based, so that they can be used to assess, prioritize and adequately respond to the health, environmental and economic impact of various climate forecasts

The Ministry of Health and Long Term Care has developed a Climate Change Health Vulnerability Assessment and Adaptation Guideline for public health units across Ontario. The Ministry of Environment and Climate Change is developing climate and health models to support the health vulnerability assessment. Examples such as this showcase the value of cross-sectoral collaboration in the development of tools to assess climate change impacts, and in the implementation of action plans to build resiliency.

Price on Carbon

Which carbon pricing market mechanism(s) will best achieve the goals of ensuring GHG emission reduction certainty, encouraging innovation in industry, improving human, social, financial, produced, and natural capital productivity, and support households and business to transition to the low carbon economy?

In order to achieve significant reductions in greenhouse gases, it is important to account for the true cost of burning fossil fuels. Any carbon pricing mechanism must take into account the health, societal

and environmental costs of climate change, or the Triple Bottom Line. Current economic models that focus solely on GDP externalize the very real and significant health care and environmental costs.

It is important that the criteria tied to carbon pricing are fair, equitable, transparent, accountable and beneficial. A percentage of revenues derived from a carbon pricing system should be directed to climate change adaptation initiatives. Revenues should also be used to support low carbon technologies.

Science and Technology

In what areas of low carbon science and technology does Ontario have competitive advantages or strategic interest?

Objective science on the health effects of climate change, combined with carbon pricing and other tools, will provide sectors and individuals with information they need to make sustainable choices. Increasing the public's understanding that climate change affects our health will be an important success factor for the Province's climate change strategy. We encourage the Province to undertake a focused public communications campaign, using recent science, to inform the public that climate change is a health issue that we can all help to address.

How can Ontario better support early stage research that could lead to future commercialization of technologies that will provide economic benefits while also helping Ontario achieve its carbon reduction goals?

Supporting demonstration projects and providing start-up funds for smaller scale low-carbon technology will encourage innovation and a green economy.