# Environmental Health and Equity:
## Public Participation in Environmental Decision-Making

## A Toolkit

Prepared by the Canadian Environmental Law Association and
Environmental Health Institute of Canada
as part of the
"Environmental Health, Equity and the Law: Making the Links" Project
with funding from the Law Foundation of Ontario



## TABLE OF CONTENTS

### Part I: An Introduction



### Part II: Environmental Health Issues: A Brief Introduction



### Part III: Getting Involved – Public Participation Tools



### Part IV: Fact Sheet Series: Environmental Health Law and Regulation: Opportunities for Engagement

**Part V: Case Studies:**
**Two Examples of How to Apply Public Participation Tools**

# CHAPTER 1: INTRODUCTION - WHO IS THIS GUIDE FOR?

The toolkit has been organized into three broad sections. The first section introduces the purpose of the toolkit and provides useful background information. The second section of the toolkit is meant to provide a brief introduction into a number of environmental issues that have been identified by the communities we work with as areas of concern. Due to the complexity of the issues, each section provides only a very high level overview of the topic, however, additional sources of information are available and we encourage readers to follow the weblinks and citations in these sections to learn more. The final section of the toolkit provides you with information and tools which can assist you as you begin to engage in the decision making process.

While all the chapters are related, each module is designed to be a stand alone source of information such that the user of the toolkit will readily be able to access the specific information desired, although it is hoped that many will find the entirety of the toolkit of use. Further, there are several embedded links to websites in the toolkit that will provide additional information.

*Disclaimer: The contents of this toolkit are accurate as of the day it is published. It is meant as a source of information, and none of what follows should be taken as legal advice. Much of the following information is a compilation of existing resources which have been arranged in a manner that should facilitate easy use. The reader is encouraged to follow weblinks to other documents in order to obtain additional information about specific areas.*

**Who is this toolkit for?**

Users may come from a wide range of experience and organizations. Ideally they will include:

- Staff or community members who provide services to their community in various disciplines, including medical and legal services
- Individuals who are actively involved in environmental and health campaigns in their community
- Low-income individuals, and other community members, who want to become involved in the environmental decision-making processes in their community

**What is the purpose of the toolkit?**

The overall goal of the toolkit is to:

- Provide up to date information on a number of environmental health issues which have been identified by our partners as areas of concern in Ontario
- Provide information and tools for individuals and community groups to become involved in environmental decision making in their own community

- Support groups and individuals that work on issues of environmental equity and environmental health in their community

**Why did we develop this toolkit?**

In consultation with community members in each of the Making the Links Project's six communities, it became clear that there was a need for a compilation of resources focused upon a number of environmental issues of concern identified by community members and a desire for a toolkit which community members could use to facilitate their participation in environmental decision-making in their communities.

Our aim in the development of this toolkit is to:

- Raise awareness about the issue of environmental equity
- Exchange knowledge and information with community members, leading to greater cooperation between community partners
- Build the capacity of individuals and community groups to participate in environmental decision-making
- Ensure that the work of the "Making the Links" Project is sustainable and can be continued

# CHAPTER 2: WHO IS CELA?
# WHAT IS THE "MAKING THE LINKS" PROJECT?

## Who is CELA?

The Canadian Environmental Law Association ("CELA") is a non profit public interest organization, established in 1970. We use existing laws to protect the environment and we advocate for environmental law reform. CELA's work focuses on four main environmental issues – these are water sustainability, green energy, sustainable land use, and pollution and health, with a particular focus on children's health.

We are also a legal aid clinic and act at tribunal hearings and in courts on behalf of low-income individuals, citizen groups, and not-for-profit organizations who otherwise would not be able to afford legal assistance. As a legal aid clinic, we are funded by Legal Aid Ontario and are part of a larger system of community legal clinics in Ontario.

Through all of our work, we try to ensure we are always working towards achieving CELA's objectives. These include:

- Providing equitable access to justice to those otherwise unable to afford representation for their environmental problems.
- Advocating for comprehensive laws, standards and policies that will protect and enhance public health and environmental quality in Ontario and throughout Canada.
- Increasing public participation in environmental decision-making.
- Working with the public and public interest groups to foster long-term sustainable solutions to environmental concerns and resource use.
- Preventing harm to human and ecosystem health through application of precautionary measures.

CELA's services include the provision of information, summary advice and referrals. In some cases, we can also provide formal representation before various courts, tribunals and other administrative bodies. We can also sometimes provide legal opinions.

If you would like to contact CELA for summary advice or information, you can contact our articling student for a preliminary intake interview at 416-960-2284, ext.216 or via email at articling@cela.ca.

## What is the "Making the Links: Environmental Health and Equity" project?

The Making the Links Project is an interdisciplinary outreach program being undertaken by the Canadian Environmental Law Association (CELA) and the Environmental Health Institute of Canada (EHIC), with funding from the **Law Foundation of Ontario**. It is focused on environmental law and access to justice issues in six Ontario communities in which there are high pollution burdens and incidences of environmental health issues, and high percentages of sensitive populations.

The six communities involved in the project are Brantford, Cornwall, Hamilton, Kenora, Sarnia and Windsor.

The goal of the project is to enhance the environmental health of the six engaged communities by focusing on the objectives of:

- increasing their level of engagement in the legal system,
- enhancing community knowledge of environmental laws and available legal tools,
- contributing to the development of community legal skills, and
- improving the capacity of frontline environmental groups and health service providers to protect the people they serve from environmental threats to health.

The project is working to build long-standing links and relationships between legal service providers, health care providers, and community members.

# CHAPTER 3: WHAT IS ENVIRONMENTAL EQUITY?

We have long known that our socio-economic success can often be predicted, in part, by the socio-economic status of our childhood neighbourhoods.[1] Recently, however, a new lens has been added as researchers have begun exploring how the socio-economic status of our community affects our environmental health and new concerns are being raised about the issue of environmental justice.

Environmental justice encompasses three main pillars: environmental equity, access to justice and meaningful participation in environmental decision making. Environmental justice is "the broad goal that incorporates the more narrowly defined problem of environmental racism."[2] It links many social movements, including anti-racism movements, Aboriginal rights and sovereignty movements, labour union movements, and environmental movements. It embodies a broad concept of environment, moving beyond only green spaces and the wilderness, to include places that comprise everyday experiences.[3]

**What is the history of environmental inequities in Canada?**

Colonialism, urbanization and the expansion of the natural resource economy have contributed to the disadvantage of specific populations including resource dependant communities, Aboriginal communities, low income and racialized communities, and biologically vulnerable communities.[4] Canadian cities do not tend to have the same racial residential segregation as American cities. However, there are certainly low income areas in Canadian cities comprised of one or more racial groups. These low income areas are vulnerable in contrast to more affluent areas where residents are able to participate in decision-making and to mobilize to protect their own interests.

Canada's economy has long benefited from our natural resources. Growth in the agricultural, forestry, fishery, oil and gas, mining, and energy sectors, has lead to enormous growth for the economy and employment. As a result of this resource development, many small municipalities across Ontario, and indeed the country, have prospered. However, there is an environmental health legacy to be considered for these municipalities and their residents. The impacts to the local ecosystems, and the by-products which are often introduced as a result of industry, influence environmental health in the region. Additionally, there are often lasting impacts if and when the industry collapses and moves on. All too often the host communities have limited resources with which to address the remaining environmental issues. Consequently, many communities bear an inequitable environmental health burden as a result of past and present industry practices.[5]

Canada's history of colonialism has also left many Aboriginal communities facing severe environmental inequities. As colonization took place in Canada, many Aboriginal communities were pushed to areas which were considered to be less desirable to European settlers. As a result, Aboriginal communities now often suffer from "myriad toxic legacies placed upon them by centuries of (first) colonial oppression and (ongoing)

post-colonial exclusion from the decisions and benefits of natural resource and industrial development which have occurred, in many cases literally, in their backyards."[6]

Generally, urban planning in Canadian cities over the 20th century has developed to benefit the middle and upper classes, while allowing some parts of cities to deteriorate. These deteriorated areas are often the areas most plagued by environmental problems such as high levels of air pollution and the presence of toxic Brownfield (contaminated) sites. They often lack urban amenities such as green space, easy access to nutritious food, walkable neighbourhoods and urban waterfronts. Unfortunately, these areas are also frequently the neighbourhoods of low income and immigrant communities; groups that are often also struggling against ongoing socio-economic and racial exclusion.[7]

Finally, a lack of recognition of the special needs of biologically vulnerable populations, such as the foetus, children, the elderly, and immuno-compromised individuals, contributes to environmental injustice in Canada. These vulnerable populations have a higher susceptibility to environmental stressors and as a result face a higher risk from environmental contaminants. For example, because of a child's small size, kilogram for kilogram of weight, a child breathes more air, eats more food, and drinks more water than an adult.[8] Thus, the impact of exposure to pollutants is greater in children. Additionally, studies have shown that the elderly carry a lifetime burden of exposure to environmental pollutants which leaves them more vulnerable to further environmental exposures.[9] Yet "these groups are not adequately protected under current environmental policies and are generally under-represented in Canadian standard setting and regulatory processes…. Further, there is presently little understanding of how biological vulnerability intersects with entrenched social inequities to exacerbate the overall magnitude of environmental injustices against these groups."[10]

**What is the history of environmental justice in the United States?**

The concept of environmental justice, and environmental equity, has taken a different path in the United States than that seen in Canada. The notion of environmental justice has grown out of the notion of environmental racism in the United States. The term environmental racism, used since the 1980's, has been described (in the 1987 report *Toxic Waste and Race in the United States*) as the "intentional siting of hazardous waste sites, landfills, incinerators and polluting industries in areas inhabited mainly by Blacks, Latinos, Indigenous peoples, Asians, migrant farm workers and low income peoples."[11] It has also been described by scholars such as R.D. Bullard as "any policy, practice or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups, or communities based on race or colour."[12]

Acceptance of the concept of environmental racism has been met with resistance in the United States. Critics argue over its existence and its place in a discussion of environmentalism. However, in the last 27 years, research in North America has shown that non-white communities are faced with a disproportionate burden of environmental problems, have less say in the design and implementation of environmental regulations,

and are less likely to have their contributions regarding the alleviation of environmental degradation considered.[13]

**What can we do looking forward?**

While in the United States there is recognition of the need to take account of environmental justice concepts in environmental decision-making,[14] in Canada there are generally no comparable policy requirements. Attempts to advance environmental justice concepts in decision-making in Canada are still at very preliminary stages. Despite inclusion of cumulative impacts in Ontario's Ministry of the Environment's Statement of Environmental Values[15], no toolkit or guide to decision-making related to cumulative impacts yet exists and the extra burden on low income, Aboriginal, racialized, and other specific vulnerable communities has not been acknowledged as an important factor in Ontario's environmental decisions. As a result, for example, new air approvals continue to be granted in communities which suffer the double burden of very significant existing air pollution levels as well as limited resources with which to respond.

It is imperative that decision-makers in Ontario be required to take account of environmental justice considerations so as to begin to address these inequities and environmental burdens. As the U.S. *Environmental Protection Act* addresses its rule making, lessons should be extracted for Canada and elsewhere as to the efficacy of that approach and this should be the subject of further investigation.

# PART II: ENVIRONMENTAL HEALTH ISSUES - A BRIEF INTRODUCTION

"Environmental health" is a term that addresses "all the physical, chemical, and biological factors external to a person, and all the related factors impacting behaviours. It encompasses the assessment and control of those environmental factors that can potentially affect health. It is targeted towards preventing disease and creating health-supportive environments. This definition excludes behaviour not related to environment, as well as behaviour related to the social and cultural environment, and genetics."[16]

Environmental health is regulated at all three levels of government: federal, provincial and municipal. Aboriginal governments also have powers and responsibilities, some of which are recognized under federal statues. In addition, international legal norms play a role in protecting environmental health within Canada.

These varying jurisdictions give rise to matching opportunities for engagement and input in environmental health law and regulation:

- At the local, regional or municipal level, citizens can provide input on matters such as local programming or municipal by-laws

- At the provincial level, citizens can provide input as individuals, groups, associations, or professionals on specific agenda items such as provincial occupational health law or toxics regulation

- At the federal level, the public can provide recommendations for new substances, evaluation of efficacy of existing laws, testing of participation provisions

Most environmental health and equity concerns have key elements which need attention by each of the jurisdictions. For example, in the case of reducing exposure to toxic substances:

- Municipalities may pass right to know by-laws (as was done in Toronto)
- Provinces may pass a Toxic Reduction Act (as was done in Ontario)
- Canada may pursue regulation of toxic substances as under CEPA
- The international community may control some toxic or hazardous substances under treaties like Stockholm or Basel

In what follows, numerous environmental health issues are introduced, and key examples of the multiple forms and levels of individual involvement are provided. These range

from personal choices to community organizing, to accessing information, to participation in the legal system.

More information on environmental health and opportunities for public participation is available from:

**Canadian Environmental Law Association (CELA)**
130 Spadina Avenue, Suite 301,
Toronto, ON M5V 2L4
Tel: 416-960-2284, Fax: 416-960-9392
www.cela.ca

**Environmental Health Institute of Canada (EHIC)**
Suite 205, 35 The Links Road, Willowdale
Toronto ON M2P 1T7
Fax: 416-364-4074 or 905-845-3794
Email:info@ehiccanada.ca
http://ehicanada.com/index.htm

# CHAPTER 4: HEALTH IN YOUR HOME

There are a number of important environmental health issues that can arise in your own home. It is important to be aware of these issues, and more importantly, how to minimize these exposures. In the sections below, we provide a brief introduction into the issues of indoor air quality, drinking water sources, radon and renovations.

## INDOOR AIR AND DUST

Indoor air and dust are largely unregulated sources of exposure for a variety of contaminants. However, both are key exposure media, especially for children, as most people spend over 80% of their time indoors.

Exposures can vary significantly, depending upon the circumstances. For example, your exposures will be different depending on the whether your home is located in an urban, suburban, or rural area, whether you live in a house or an apartment, or whether you live near or far from high traffic areas or industry.

Additionally, living in poverty can often contribute to greater exposures in the home, due to the fact that there are significant risks associated with older, poorly maintained housing. Examples of such exposures include lead paint hazards, pesticide use to control insects and rodents, and excessive moisture and dampness.

Indoor air contaminants of concern, especially for children, can include:

- dust – (many contaminants of concern are present in house dust, on floors and especially in older carpets)
- environmental tobacco smoke – where smoking occurs indoors
- inhalable particles from combustion products (from improperly sealed/operated woodstoves, or wood-burning fireplaces);
- nitrogen dioxide (from inadequate or improper venting of gas furnaces or stoves);
- Volatile Organic Compounds (VOCs) (from new building materials, floor coverings and furniture, cleaning products and solvents, etc.); and
- biological allergens (moulds, pet dander, house dust mites and cockroach feces).

**DUST**

In addition, contaminant levels in indoor dust are of increasing concern, and present a significant exposure pathway for children. A large number of chemicals originating from consumer products can be found in dust. These include:

- phthalates (from vinyl flooring and other softened plastics or vinyls, such as shower curtains);
- alkylphenol compounds (from cosmetics and other personal care products);
- brominated fire retardants (used as fire retardants in furniture and electronics);
- organotin compounds (used to stabilize PVC plastics or to kill dust mites in carpeting);
- short-chain chlorinated paraffins used in plastics, paints, and rubbers; residues of pesticides either tracked in from outdoors or due to indoor uses;
- metals such as lead, mercury, and cadmium. Lead in older paint isof particular concern since a large portion of the housing stock in Ontario still contains leaded paint particularly that occupied by low income families. Approximately 50% of the daily lead intake of two-year old urban children occurs by ingestion of house dust through normal hand-to-mouth behaviour.

The above list is only a select list of the complex mixture of particles, allergens, and chemicals that can be present. House dust is the main source of contaminant exposure for young children still crawling or frequently mouthing their hands and objects

HOW CAN I REDUCE EXPOSURE ?

Many low cost steps can lower your exposure to indoor contaminants, including:

- ensure adequate ventilation
- removing shoes at the door
- using washable mats at the door (wash separately from other laundry)
- regular hand washing
- maintain a smoke free environment
- avoid using pesticides inside your home
- vacuum regularly - Vacuum existing carpeting once a week, twice a week in homes with a crawling child. Be careful to dispose of the dust rag and vacuum cleaner bag safely after use
- dust regularly - Make sure to dust with a moist rag or using a vacuum cleaner Reconsider the need for carpets especially in children’s play areas
- Choose “environmentally friendly” carpeting and rug shampoos and ensure good ventilation after installation of new or professionally cleaned carpets
- Choose low VOC products and materials (watch for labels with no hazard symbols, those labelled “non-toxic”, “environmentally friendly”, or “low-VOC”)
- Clean with non-toxic cleaning products (homemade cleaning products are a great choice!)

- Generally stick with natural, untreated materials rather than synthetic and/or treated materials
- ensure that fuel-burning appliances are well maintained and inspected yearly;
- monitor and control humidity levels and ensure leaks and cracks in walls, floors, roofs and basements are fixed;
- Don't idle your car or run other fuel-burning engines in an attached garage and keep the door between your garage and home closed;
- Do not store paints, solvents or varnishes inside your home.

FOR MORE INFORMATION ON INDOOR AIR QUALITY ISSUES

For assistance in identifying less toxic alternatives for personal care and household cleaning, see the "Guide to Less Toxic Products" published online by the Environmental Health Association of Nova Scotia: http://www.lesstoxicguide.ca/

For a room-by-room list of recommendations of toxic-free alternatives, see "Alternatives in your Home – Toxic Nation" published online by Environmental Defence: http://environmentaldefence.ca/campaigns/toxic-nation/alternatives-in-your-home

## VOLATILE ORGANIC COMPOUNDS (VOCs)

Volatile organic compounds (VOCs) are organic compounds which evaporate readily to the atmosphere. VOCs have been listed as a toxic substance under schedule 1 of the *Canadian Environmental Protection Act, 1999* (http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=0DA2924D-1&wsdoc=4ABEFFC8-5BEC-B57A-F4BF-11069545E434). The Environment Canada definition of a "VOC" is accessible online: http://www.ec.gc.ca/cov-voc/default.asp?lang=En&n=105A29F5-1

VOCs impact both indoor and outdoor air quality. VOCs are precursors to the formation of the main ingredients of smog (ground level ozone and particulate matter) and therefore contribute to outdoor air pollution.

The transportation sector is responsible for the majority of VOC emissions (42% of overall emissions), and the use of solvents in consumer and commercial products is the second largest source of VOC emissions. [17]

VOCs are also present in indoor air. In fact, VOC levels can be two to five times higher inside the home than outside. Common VOCs in indoor air include formaldehyde, phenol, benzene, xylene, and toluene. VOCs are emitted from consumer and commercial products, including printing inks, air fresheners, markers, tobacco smoke, dry cleaned clothing, new furniture, building materials, glues and adhesives, paints and lacquers, paint strippers, mothballs, and many household cleaning and personal care products (such as underarm anti-perspirants). [18]

VOCs are linked to many harmful health effects including eye, nose and throat irritation, headaches, premature death, respiratory disease and cancer. As with other air contaminants, children are more highly exposed than adults, due to size and metabolic differences. Effects of exposure to VOCs for children include impacts on the developing brain of the fetus and child. The child's developing lungs are also more vulnerable to irritant or toxic effects. Among the many sources and types of VOCs, much uncertainty exists about the health effects of these chemicals in the home. [19]

Carpet can be of particular concern with respect to VOCs. Newly installed carpeting can emit VOCs or other semi-volatile compounds from the carpeting material itself, the carpet backing, and chemicals applied during or after manufacturing to serve as flame retardants. VOC emissions are the highest immediately after the use or installation of products and materials, and their reduction over time varies considerably depending on the emitting material. For more information on VOC emissions, as well as other environmental health issues that arise during renovations, see: "Healthy Retrofits: The Case for Better Integration of Children's Environmental Health Protection into Energy Efficiency Programs" [20]

HOW CAN I REDUCE EXPOSURE TO VOCs IN INDOOR AIR?

Keep your home well ventilated, especially during renovations or while painting or installing carpets or flooring

- Choose low-emission products when possible (look for labels stating "no-VOC," "VOC-free," "low-VOC" or "non-toxic.")
- Do not smoke indoors
- Avoid some personal-care products and cleaning products. [21]
- Avoid the use of plug-ins or aerosol air fresheners. [22]
- Use household products according to manufacturer's directions.
- Make sure you provide plenty of fresh air when using these products.
- Throw away unused or little-used containers safely; buy in quantities that you will use soon.
- Keep out of reach of children and pets.
- Never mix household care products unless directed on the label.

**Childproofing Tips:**

- Children, pregnant and nursing women should avoid exposure to solvents.
- If possible, buy products that do not need to be painted, varnished, stained or stripped.
- Use low emissions products. Use latex-based paints and look for labels stating “no-VOC,” “VOC-free,” “low-VOC” or “non-toxic.” Latex paints will contain far less VOCs than oil-based paints and can be cleaned up with water. For solvents, try the less-toxic citrus-based products. To play it safe, avoid paints that contain fluorine compounds.
- When you use solvents, follow label instructions carefully. You generally need to wear a mask, eye protection and gloves. Do not eat or drink anything at the same time.
- Make sure to keep the renovation space well-ventilated, especially when using paint-strippers, paints or stains and during the installation of plumbing, flooring and any activity using glues or adhesives.
- Make sure to keep the renovation space well-ventilated, especially when using paint-strippers, paints or stains and during the installation of plumbing, flooring and any activity using glues or adhesives.
- Ensure that products are tightly closed and avoid spills. Dispose of excess products at hazardous waste collection facilities provided by your municipality.
- Read labels and seek out products that are water-based and/or have no hazard warning signs. [23]

FOR MORE INFORMATION ON VOCs

For more information on VOCs please see Pollution Probe’s Primer on VOCS: http://www.pollutionprobe.org/report/vocprimer.pdf See also the Environment Canada website: http://www.ec.gc.ca/cov-voc/default.asp?lang=En&n=59828567-1

For information on the health effects of exposure to VOCs on children, see the website of the Canadian Partnership for Children’s Health and the Environment: www.healthyenvironmentforkids.ca

## MOULD

Mould is one of the most important biological allergens, particularly in sub-standard housing where moisture is not adequately controlled or vented. . The elderly, pregnant women, infants and young children, people with allergies, chronic respiratory illness, and/or chemical sensitivities, and those with weakened immune systems are most likely to experience health effects from mould.

Mould health effects can include:

- Airway and eye irritation Headache
- Difficulty in concentrating
- Hypersensitivity reactions: asthma, rhinitis
- Infections due to immune effects
- pulmonary haemorrhage in infants (associated with acute exposure)

You can prevent mould from developing in your home by controlling humidity (ex. limit the use of humidifiers, limit the number of indoor plants in the home), having proper ventilation (ex. exhaust fans in bathroom and kitchen, open windows), and controlling moisture (ex. repair leaks immediately, thoroughly clean following a flood, discarding materials that cannot be dried and/or cleaned).

FOR MORE INFORMATION ON MOULD

For more information on mould see Health Canada's website: http://www.hc-sc.gc.ca/ewh-semt/air/in/poll/mould-moisissure/index-eng.php

For information for tenants, see the Canada's Mortgage and Housing "Tenant's Guide to Mould": http://www.cmhc-schl.gc.ca/en/co/reho/reho_001.cfm If you would like to contact a Legal Aid Ontario clinic, you can find the clinic closest to you online: http://legalaid.on.ca/en/

## RADON

Radon is a radioactive gas that is invisible, colourless, and odourless. It is produced from the natural breakdown of uranium in rocks and soil. When released from the ground into the air it is diluted and not a health concern. However, when released indoors, it can build up to dangerous levels and is a serious health concern. Long-term exposure to radon is the second leading cause of lung cancer in Canada

The air pressure inside buildings, causes gases, including, radon, to be drawn inside. Radon can enter a home through very small openings, including gaps or cracks in foundation, walls, and floor, and around pipes, support posts, and floor drains.

WHAT CAN I DO TO ENSURE MY HOME DOES NOT CONTAIN DANGEROUS LEVELS OF RADON?

1. Health Canada recommends that all homes be tested for radon.
    - Testing is easy, inexpensive and there are several types of testing devices to choose from. Some test over the short term (2 to 7 days) and others over a longer term (3 to 12 months). Health Canada recommends that homes be tested for a minimum of three months. For more information on testing, see Health Canada's website: "Radon – Is It In Your Home?" http://www.hc-sc.gc.ca/ewh-semt/alt_formats/hecs-sesc/pdf/pubs/radiation/radon_brochure/radon-brochure-eng.pdf

2. Reduce the amount of radon in your home by:
    - increasing ventilation via a heat recovery ventilator (HRV) to allow an exchange of air.
    - Seal all cracks and openings in foundation walls and floors
    - Paint basement floors and foundation walls with two coats of paint and a sealant.
    - Ventilate the basement sub-flooring by installing a small pump to draw the radon from below the concrete slab to the outside before it can enter your home.
    - Renovate existing basement floors, particularly earth floors.
    - Hire a contractor to perform Active Soil Depressurisation (ASD), which is the most common and effective radon reduction method. Health Canada recommends that the contractor be certified from an accredited organization.

FOR MORE INFORMATION ON RADON

For more information, visit the Health Canada Web site www.healthcanada.gc.ca/radon or call 1 800 O-Canada (1 800 622-6232), TTY – 1 800 926-9105

For more information on radon and testing your home see the booklet "Radon – A guide for Homeowners" published by Health Canada and the Canada Mortgage and Housing Corporation (CMHC). It provides information on radon, testing for radon, and reducing high levels of radon. For a free copy, visit the CMHC Web site www.cmhc-schl.gc.ca and search for "radon" or call 1 800 668-2642.

**RENOVATIONS**

The risks of indoor exposures can be greatly increased during renovations and repairs.

Home renovations, including energy efficiency upgrades, can make your home healthier, and more comfortable, save money on heating costs, and be good for the environment. However, this work needs to be done carefully, especially in older homes.

Dust released during the course of renovation or re-building activities can contain fine particles, metals and chemicals, including high levels of lead, and even asbestos fibres, which can be inhaled into the lungs. There are hazardous chemicals in the dust created by cutting or sanding pressure-treated wood. Hazardous solvents and volatile organic compounds (VOCs) are in many different glues, sealants, varnishes and paints. Even new furniture, flooring or carpeting can "off-gas" chemicals when it is installed, during the first weeks and even longer. Work that is done outside can track chemicals indoors.

Extreme care is necessary, especially to prevent hazards for children and pregnant or nursing women. Exposure to lead and solvents can damage brain development in the womb and in young children. Many other health concerns are linked to dust or chemicals from renovations including risks of asthma and cancer. [1]

HOW DO I PROTECT MYSELF AND MY FAMILY DURING RENOVATIONS?

- Children and pregnant women should stay away from areas being renovated, to avoid exposure to potentially harmful substances
- Dust from renovations should be controlled and contained. Using plastic sheeting and duct tape, seal off the rest of the house from the renovation site. Also close all heating and cooling vents, particularly in older homes. Renovation dust may contain high levels of lead
- Use a good industrial vacuum for regular clean-up within the area being renovated or regular use of sweeping compound.
- Choose less toxic paints, finishes and glues. Look for products labelled "VOC – free", "zero – VOC" or "low- VOC". Make sure to open windows and use fans to circulate fresh air during and after the use of these products.
- Keep work clothes and shoes in a separate hamper and launder separately. Change your clothes and shower before going into rooms where children spend their time. [24]
- Renovate during the summer to enable the airing out of the home.
- Avoid tracking indoors any dust or debris created by exterior paint removal and repair or work with pressure-treated wood.
- Avoid building children's play equipment, pet shelters, raised garden beds or compost bins out of old painted wood or green-tinged pressure treated wood.
- Ask the contractors you hire to follow renovation childproofing tips. [25]

FOR MORE INFORMATION ON SAFETY DURING RENOVATIONS

For more information see CPCHE "Playing It Safe – Safe Renovations : Introduction": http://www.healthyenvironmentforkids.ca/sites/healthyenvironmentforkids.ca/files/cpche-resources/Safe_Reno_Intro_E_F.pdf and the other fact sheets from the "Safe Renovations Series" online at:

[1] "Playing It Safe: Safe Renovations – Introduction" prepared by the Canadian Partnership for Children's Health and Environment, March 2008 (available online: http://www.healthyenvironmentforkids.ca/)

http://www.healthyenvironmentforkids.ca/content/renovate-right or Health Retrofits: The Case for Better Integration of Children's Environmental Health Protection into Energy Efficiency Programs, online: http://www.healthyenvironmentforkids.ca/resources/healthy-retrofits-full-report

**DRINKING WATER SOURCES: LEAD**

Trace levels of contaminants can occur in drinking water although compared to other media, the contribution from drinking water tends to be quite low. Lead is of notable concern in some circumstances. Lead can enter drinking water from water supply pipes or service lines, solder containing lead, brass fixtures, or, rarely in homes built prior to the 1930s, indoor plumbing made of lead pipes. The contribution of lead from drinking water to overall lead exposure is generally fairly small but it can be a significant source for babies fed formula prepared with tap water. As well, there is no safe lower limit of exposure for lead in children. Further, low level lead exposure creates a lifelong risk for cardiovascular disease in adults. Precaution is thus warranted.

In most municipalities, some households will test higher for lead in their drinking water often due to lead water pipes running into the home from the municipality's water main in the street. In 2007, drinking water regulations were modified such that municipalities are required to test for lead in the municipal drinking water and deal with lead corrosion if a problem. Many municipalities do testing for lead. Consult your municipality to determine whether this service is offered.

If your municipality does not offer this service, and you would like to have your water tested for lead, see the Ministry of Environment (MOE) website at http://www.ene.gov.on.ca/en/water/sdwa/licensedlabs.php for a list of laboratories licensed for testing lead in drinking water or contact the MOE at 1-800-565-4923. If you have tested your tap water and need help understanding your test results, contact Public Health Services at (905) 546-2189.

You can also check yourself whether or not your home has lead service water pipes by locating your water meter, typically found in the basement, and looking at the pipe coming up through the basement floor into the bottom of the water meter. Lead is grey, does not echo if you gently strike it, scratches easily and leaves metallic marks when you rub the scratched area against paper.

In homes with lead service pipes it is wise add a tap filter that is certified to remove lead from your drinking water. If you do not have a filter to remove lead, it should be regular practice to flush or run taps in the morning or if the house has been empty all day before drinking from them. Generally, it is advisable to let water run for five minutes. You can save the water you run during this time and use it for other purposes (e.g. plant watering, washing dishes).

You can find out if municipality has a program to assist homeowners to replace the private portion of the service lines that may be comprised of lead. You can contact your local municipality to find out if this program is available in your area. It is very important that this water line replacement be done from both sides – yours and the municipal line into your home. If only done from one side, lead levels can actually increase in your water.

You can also use a NSF (National Sanitation Foundation) certified water filter that removes lead from your drinking. Check the product label to ensure the filter you are purchasing is NSF certified.

## LEGAL TOOLS: ACCESSING INFORMATION AND PUBLIC PARTICIPATION

The sources of indoor environmental exposures vary, and there are numerous pieces of legislation under which there may be opportunities for the public to engage. These include:

### *(a) Canadian Environmental Protection Act (CEPA)*

As discussed above, the use of chemicals in consumer products affect indoor air quality. Under CEPA, the government is required to act expeditiously to assess whether existing or new substances are toxic or capable of becoming toxic, and assess the risk they pose to the environment and human life and health. Similarly, the Minister of Health and the Minister of the Environment are required to conduct research relating to hormone disrupting substances including detection, effects, preventive, control and abatement. The Minister of Health is required to conduct research regarding role of substances in illnesses or in health problems & distribute it to the public.

Under CEPA, members of the public can review CEPA registry notices and submit comments on CEPA-related documents

- The CEPA Registry is a comprehensive source of information, including proposed and existing policies, guidelines, codes of practice, government notices and orders, agreements, permits, and regulations. It enables the public to monitor the progress of these instruments from the proposal stage to their final publication in the *Canada Gazette*, and to participate in consultation and decision-making processes under the Act.
    - The CEPA online Registry can be accessed here: http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=D44ED61E-1
- CEPA also provides members of the public with the ability to:
    - Review and respond to notices regarding potential declarations of toxicity
    - Review and respond to draft chemical management plans
    - For more information on opportunities for public participation, please see Part IV, Chapter 18, Fact Sheet on the *Canadian Environmental Protection Act.*

***(b) Canadian Consumer Products Safety Act (CCPA)***

The CCPA broadly defines danger to human health and safety. The public can

- access information from Health Canada on products controlled, and recalled items: http://www.hc-sc.gc.ca/cps-spc/legislation/acts-lois/ccpsa-lcspc/index-eng.php
- For more information on opportunities for public participation, please see Part IV, Chapter 21, Fact Sheet on the *Canadian Consumer Products Safety Act.*

***(c) Pest Control Products Act (PCPA)***

As mentioned above, pesticides (either used indoors or tracked indoors) can become part of the indoor house dust and pose a health risk, especially for children. The PCPA regulates the use of pest control products.

Under the PCPA, members of the public can:

- Access information with regards to products, applications, registrations, re-evaluations and special reviews via the Pest Control Products Public Registry, accessible online: http://www.hc-sc.gc.ca/cps-spc/pest/part/protect-proteger/publi-regist/index-eng.php
- Review pesticide assessments
- Make suggestions for special reviews
- Ask for reconsideration of registration decisions, export decisions, or cancellation of export permits
- For more information on opportunities for public participation, please see Part IV, Chapter 24, Fact Sheet on the *Pest Control Products Act.*

***(d) Food and Drug Act***

The *Food and Drug Act* regulates cosmetics as well as food and drugs. As noted above, chemicals from cosmetics are found in indoor house dust.

Under the *Food and Drug Act*, members of the public can:

- Access information via the Food Directorate, accessible online: http://www.hc-sc.gc.ca/ahc-asc/branch-dirgen/hpfb-dgpsa/fd-da/index-eng.php
- Call for additional labelling
- Provide input into the regulation making process (i.e., whether a particular ingredient should not be allowed to be used in cosmetics)
- For more information see Part IV, Chapter 23, Fact Sheet on the *Food and Drug Act* or Health Canada's website: http://www.hc-sc.gc.ca/ahc-asc/branch-dirgen/hpfb-dgpsa/fd-da/index-eng.php

***(e) Toxic Reduction Act***

The *Toxic Reduction Act* is intended to reduce the use of toxic chemicals in consumer products. Under the Act, members of the public can:

- Review plans as they are developed
- Review reductions achieved

- Suggest the addition of substances to the regulations under the Act
- Ask the MOE for reports of results
- For more information see Part IV, Chapter 25, Fact Sheet on the *Toxic Reduction Act*

***(f) Clean Water Act***

The *Clean Water Act's* purpose is to protect sources of drinking water. Under the Act, Source Protection Planning Areas were established on a watershed basis, and Source Protection Planning Committees developed to oversee the assessment of threats to drinking water. Under the Act, members of the public can:

- Follow meetings off local drinking water Source Protection Committees, and access information online about drinking water source protection: www.sourcewaterinfo.on.ca
- Request to be added to mailing lists
- Provide input with regards to (a) proposed Source Protection Plans, and/or with respect to threat assessment reports
- For more information, see Part IV, Chapter 29, Fact Sheet on the *Clean Water Act* or the Drinking Water Source Protection Website: www.sourcewaterinfo.on.ca/

***(g) Safe Drinking Water Act***

The *Safe Drinking Water Act* establishes drinking water standards, rules for operators of drinking water systems and laboratories that do drinking water testing (among other matters). Under the Act, adverse test results from treated water testing must be reported to the system owner/operator, the MOE and the medical office of health. Likewise, testing and reporting must be made available to the public. Under the Act, members of the public can:

- Access water testing reports
- Access information about sources in the local community and information about how local water is treated
- Provide input about water system planning and financing
- For more information, see Part IV, Chapter 30, Fact Sheet on the *Safe Drinking Water Act.* For more information please see the Canadian Environmental Law's FAQ, accessible online: http://www.cela.ca/sites/cela.ca/files/SDWA%20FAQs-25.11.2011_0.pdf

(h) ***Health Protection and Promotion Act***

Ontario's *Health Protection and Promotion Act* makes it mandatory for public health programs to include community sanitation, safe drinking water, and prevention of communicable disease. It also includes responsibility for Small Drinking Water Systems. The Act also places a positive statutory duty on Medical Officers of Health to keep themselves informed with respect to occupational and environmental health, and requires that they determine potability of community's water. Likewise, various obliges ministries to supply information to the Medical Officer of Health.

Under the Act, members of the public can:

- Ask health unit about the small water systems inspection program
- Look at Drinking Water Advisories and Boil Water Advisories
- Ask questions of local medical officer of health
- Suggest environmental health issues be included in programming
- For more information, see Part IV, Chapter 31, Fact Sheet on the *Health Protection and Promotion Act*

(i) Likewise, there are opportunities to access information and participate exist under various Sector specific regulations. These regulations include:

- Federal Halocarbon Regulations – (refrigeration and air-conditioning)
- Phosphorus concentration for laundry detergents
- Chlor-Alkali Mercury release regulations (plastics for example)
- Chlorobiphenyls Regulations (PCBs)

Under all of the above, as well as others, the public can:

- ask for monitoring, annual reports, compliance reports
- ask how the law is working, that is they can request information about departmental analyses conducted, or engage in such an analysis
- Is it accomplishing what it was meant to do; are there resources for inspection and compliance
- Suggest these questions to the federal commissioner for sustainable development or the provincial Environmental Commissioner of Ontario.
- For more information, see Part IV, Chapter 20, Fact Sheet on Sector Specific Regulations

**OTHER AVENUES FOR CHANGE**

In addition to the legal tools to access information and participate in decision-making, the following non-legal tools are available:

- Write your MPP
- Contact your local health department

# CHAPTER 5: CHILDREN'S ENVIRONMENTAL HEALTH

Environmental exposures are among the multiple factors that determine health and well-being throughout life. Early environmental exposures often have the greatest potential for harm. The importance of attention to the impact of the environment (both the indoor and outdoor environment) on the health of children has been increasingly recognized in recent years.

CELA's work within the Canadian Partnership for Children's Health and Environment includes extending the well-understood and effective concept of 'childproofing' to encompass protection from environmental health risks. In addition to such personal actions that parents and caregivers of children can take, additional policy changes are needed in order for Canada to have an effective, prevention-oriented approach to children's environmental health protection. The good news is that environmental exposures are largely preventable.

Environmental health threats to children include:

- Air pollution (indoor and outdoor)
- Water contamination (chemical and biological)
- Metals such as lead, mercury, and arsenic
- Persistent organic pollutants (POPs) including dioxins, furans, PCBs, chlorinated pesticides, brominated flame retardants, etc.
- Diverse chemicals associated with a range of developmental health concerns and often found in consumer products including phthalates, bisphenol A, perfluorinated substances, etc.
- Pesticides, particularly organophosphates, carbamate and pyrethroids
- Environmental Tobacco Smoke
- Ionizing and UV radiation
- Links between poverty, nutrition, and environmental degradation
- Occupational exposures (via parental exposures)

In children, environmental exposures are linked to an increased risk of:

- asthma and respiratory problems
- impacts on brain development and brain functioning
- cancer

- impacts on reproduction, fetal and child development
- impacts on the endocrine system and immune system (often contributing to several of impacts noted above)

**Heightened Vulnerability of Children**

The fetus and child are more vulnerable to environmental exposures than adults, with the greatest vulnerability being *in utero* exposures. Maternal and paternal preconception exposures, especially occupational exposures, are also important risk factors. Reasons for the heightened vulnerability of the fetus and child include:

a. Higher levels of exposure among children:
   - Contaminants can cross the placenta and some are known to occur at higher levels than in maternal circulation
   - Children eat, drink and breathe more than adults per unit of body weight
   - Behaviours (e.g., hand-to-mouth activity) increase exposures to contaminants, especially to indoor house dust

b. Greater susceptibility to harm:
   - Rapid, dynamic process of development during childhood creates "windows of vulnerability"
   - Immune and detoxification systems in children are immature/still developing

**Environmental Inequities**

Socio-economic factors, such as poverty, place many children at even greater risk for both exposure and adverse health effects. Poverty is a well-known health risk in itself, and environmental exposures are often higher among low-income children. Factors that increase risk for low-income families can include:

- substandard housing potentially resulting in greater exposure to:
  - mould
  - lead in old paint
  - radon (due to cracks in foundation or basement dwellings)
  - greater use of pesticides
  - backdrafting of combustive gases
- longer use and reuse of consumer products with resulting release of contaminants that partition to house dust
- greater use of canned foods and greater exposure to bisphenol A
- greater consumption of energy dense foods containing higher levels of persistent organic pollutants.

First Nations children are likely at greatest risk due to high levels of poverty and exposures from diet and, in some cases, local industrial pollution sources. First Nations communities (as well as some Asian communities) place a high cultural value on fish

consumption which can result in higher exposure to methylmercury and POPs, depending on fish sources and types.

**Exposure sources**

Children spend over 80% of their time indoors. The primary sources of toxic substance exposure arise in the following areas:

1. Air and dust (indoors and outdoors)
    a. Outdoor sources include transportation, industry, electric generation, etc. all of which can contribute to indoor air pollution.
    b. Indoor sources arise from diverse consumer products.
2. Food (including pesticide residues, persistent environmental contaminants, as well as those arising from foodware, and food packaging)
3. Consumer products (largely indoors and contributing to contaminants in air, dust and food). Selected examples include:
    a. Electronics, carpeting, furnishings, etc. (toxic substances used as flame retardants, stain repellants, or for mould resistance)
    b. Vinyl products, cleaning and personal care products (phthalates and volatile organic compounds)
    c. Children's toys (may contain lead, cadmium or phthalates)

Bisphenol A used in canned food and thermal paper in cash register

Children experience multiple exposures to very low levels of toxic substances on a daily basis with uncertain consequences. The potential exists for multiple health effects. While there is vast complexity and uncertainty, these are high stakes risks and precaution should be taken and exposures reduced whenever possible. Concurrently, changes in environmental policy and regulation need to be pursued.

**WHAT CAN I DO ON A PERSONAL LEVEL TO REDUCE EXPOSURES?**

1. Reduce house dust
    - Clean with a good quality vacuum once a week (twice a week if you have a crawling child) and remove dust with a damp cloth or wet mop. Avoid dry dusting that recirculates the dust back into the air.
    - Remove shoes at the door to minimize the amount of dirt brought inside. Use washable entrance mats and launder them separately from clothing.
    - Reduce the amount of dust in the home by minimizing clutter and storing toys in a closed container. [26]

2. Use non-toxic cleaning materials
    - Wash your hands often, using regular soap and warm water. Do not use antibacterial soaps.
    - Choose non-toxic cleaning products.
    - Do not use air fresheners, or dryer sheets, and choose fragrance free laundry detergents. Fragrances in these products (or 'parfum') can contain potentially harmful chemicals.

- Avoid dry cleaning or find a dry-cleaner with non-toxic methods.
- Keep cleaners out of the reach of children[27].

3. Avoid plastics
    - Don't use plastic containers or plastic wrap in the microwave, even if the packaging says 'microwave safe'. At high heats, chemicals can leach from plastic into food and drinks
    - Store food in glass or ceramic containers (rather than plastic)
    - When heating milk, use a non-plastic container. Preferably use non plastic baby bottles (i.e., glass), or alternatively, when the liquid has cooled, transfer it to the plastic baby bottle.
    - Avoid teething toys, bibs, bath toys, shower curtains, and other items that contain PVC or vinyl (a type of soft plastic) as these items may contain phthalates, which were banned in children's toys in June 2011.
    - Avoid canned food to avoid exposure to BPA, a chemical often used in the lining of cans. Choose instead to eat fresh or frozen foods. [28].

4. Be selective when purchasing fish
    - Take care to choose varieties that are low in mercury (a chemical harmful to the developing brain). Safer choices include: atlantic mackerel, herring, rainbow trout, wild (or canned) salmon, and tilapia
    - Choose 'light' varieties of tuna (as contain less mercury than albacore or 'white' tuna). [29] For more information on mercury see CPCHE's online collection: http://www.healthyenvironmentforkids.ca/collections/metals-mercury

FOR MORE INFORMATION

For more information see the website of the Canadian Partnership for Children's Health and Environment: http://www.healthyenvironmentforkids.ca/

## LEGAL TOOLS: ACCESSING INFORMATION AND PUBLIC PARTICIPATION

Opportunities to access information and participate in decision-making exist in several pieces of federal and provincial legislation that are relevant to children's environmental health. Examples include:

- ***Canadian Environmental Protection Act (CEPA)*** – members of the public can (a) suggest needed research, (b) provide input into standards and risk management such as the Chemicals Management Plan, (c) call for extension for regulations, (i.e., regulations restricting phosphorus (in hand and dishwashing soaps).

- ***Canada Consumer Products Safety Act*** – broadly defines danger to human health and safety. The public can access information from Health Canada on products controlled, and recalled items: http://www.hc-sc.gc.ca/cps-spc/legislation/acts-lois/ccpsa-lcspc/index-eng.php

- ***Pest Control Products Act*** – provides a Pesticide registry on which members of the public can find: information on particular pesticides, including information on active ingredients, whether pesticides are subject to evaluation, and details on the non-active ingredients or "formulants" used

- ***Food and Drugs Act*** – regulates food, drugs and cosmetics, and provides an online Food Directorate on which information relating to product applications and registrations can be viewed. Information on the Health Canada Food Directorate is available here: http://www.hc-sc.gc.ca/ahc-asc/branch-dirgen/hpfb-dgpsa/fd-da/index-eng.php

- ***Toxics Reduction Act*** – applies toxics in consumer products (as well as in air, water and on land), and allows members of the public to review annual reductions in facilities and suggest additional substances to be added to the regulations under the Act, or request from the Minister of the Environment reports of results under the Act.

For more information, see Part IV facts sheets on opportunities for engagement in federal and provincial legislation.

**LAW AND POLICY REFORM**

Because the problem of environmental exposures can not be avoided by careful personal choices alone, efforts must be focused on appropriate law and policy reforms. Examples of necessary policy reform include:

- Better regulation of international trade/product safety
- Evolution away from the simplistic approach of evaluating and regulating each chemical one at a time, in isolation from others
- Substitution of toxic substances with safer alternatives
- Viewing socio-economic factors as intertwined with environmental factors and the necessity for upstream strategies (job creation, living wage, just transition, healthy housing, changes in land use planning, etc.)

To advocate for law or policy reform, you may want to:

- Ask the federal government, through the Minister of Health, to establish a list of substances that are known to cause cancer, reproductive or developmental effects and require mandatory labelling of all consumer products that contain these substances as a matter of public right-to-know.

- Ask the federal government to act to reduce the two most common sources of bisphenol A by banning its use in food containers and food packaging and the use of this chemical in commonly used thermal paper.
- Support ongoing efforts at the provincial level (such as in British Columbia) to establish province-wide bans on the cosmetic use of pesticides.
- Support green chemistry initiatives, including via provincial and federal research and funding programs, so that safer alternatives to toxic substances are increasingly available
- Check out CELA's website for ongoing campaigns.

**OTHER AVENUES FOR CHANGE**

- Reduce exposures through personal choices

As discussed above, many environmental exposures can be prevented through careful consuming and personal choices.

- Support green chemistry

With your decisions on what products to buy, you can simultaneously reduce exposures to chemicals and support emerging companies and green technologies.

- Raise awareness

While law and policy reform is sought, it is important to spread awareness and share information about the potential risks of childhood environmental exposures. You may want to consider raising awareness locally by:

- Contacting your local MP or MPP and asking for precautionary policies to protect children's healthCreate or join a local campaign
- Propose an initiative aimed at new parents at your local community centre or settlement centre.
- Approach your local schools or daycares and request that they establish a children's environmental health committee to:
  - Designate a team to address environmental health concerns and ensure reduced exposures (see CPCHE's "Advancing Environmental Health in Child Care Settings: A Checklist for Child Care Practitioners and Public Health Inspectors")
  - Assess current policies and practices
  - Guide future decisions and practices
  - Offer information to staff and parents

For more information on children's environmental health, see the Canadian Partnership for Children's Health and Environment website:
http://www.healthyenvironmentforkids.ca

# CHAPTER 6: AIR POLLUTION AND AIR APPROVALS

*Note: This chapter is not a comprehensive review of the legislative and regulatory framework as it pertains to air pollution. Rather, it is a summary which includes a brief description of recent changes to the approvals system, and outlines opportunities for the public to access information and participate in decision-making.*

Human reactions to air pollution range from short-term health effects such as asthma, skin rashes and eye, ear and throat irritation to long term effects including bronchitis, emphysema, lung disease and cancer. Vulnerable populations – such as children, the elderly and people with respiratory diseases – may suffer more extreme effects from exposure to air pollution. In addition to its adverse effects on human health, air pollution impacts crops, animals, and water pollution. Likewise, there are social and economic consequences. Increases in human health effects cause decreases in economic productivity and increases in illness and healthcare costs. [30]

While air pollution is caused by natural sources, human activities are responsible for the majority of air emissions. In the absence of smoking or other indoor pollution, industry emissions and urban vehicle emissions are main sources of exposure to urban air pollutants. Some common air pollutants include:

- Oxidants (i.e., ozone) – caused by automobile emissions, combustion processes, and industrial emissions. Exposure to high short-term levels can damage, in particular, the developing lungs of infants and children.
- Sulphur oxides (i.e., sulphur dioxide) – industrial processes such as during production of copper, lead, zinc, pulp and paper plants, oil and natural gas recovery and the burning of fuels such as coal and oil.
- Particulate matter - usually refers to solid or liquid matter suspended in air and can be caused by a variety of activities including agricultural, mining of sand and minerals, metal smelting, power generation, incineration of garbage. The effect on human health depends on the size and physical and chemical composition of the particles, how deeply they penetrate the lungs and how long they remain there. Health effects range from eye, nose and throat irritations to pulmonary and cardiovascular disease.
- Carbon monoxide – caused by the combustion of wood, coal, oil, gasoline and often released by automobiles, energy production, and logging operations. Children are particularly vulnerable because the highest concentrations of carbon monoxide are often found 3 – 4 feet from the ground. Health effects include nausea, headaches, lethargy, and death.
- Nitrogen oxides – created by combustion through human activities such as burning fuel for transportation and heating of buildings. Health effects include altered odour perception and ability of vision to adapt to darkness. Children are most susceptible to effects such as bronchitis and changes in pulmonary functions (in cases of chronic exposure).

- Hydrocarbons (i.e., benzene, toluene, ethylbenzene and xylene) – used in fuels, feedstock, solvents, cleansers and are emitted from fuel combustion, and through the use, leaks and spills of petroleum products. Heath effects include cancer.
- Volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs) – VOCs are released from car engines, solvents, paint, glue, dry-cleaning. PAHs and are caused by human activity such as the tobacco smoke, the burning of wood for heat, more vehicle emissions, and industrial operations. Primary health concern is that they are carcinogenic.
- Heavy metals – released from smelters, fuel burning, and industrial processes. Many are both highly persistent and highly toxic. For example, lead, which interferes with the functions of the central and peripheral nervous systems, the kidneys and the blood system. [31]

Some facilities conduct their own monitoring and reporting, and these results may be accessible online. Consult the facility in question for more information on their monitoring and reporting practices.

## FOR MORE INFORMATION

For more information on air pollution see the federal Air Quality Health Index, available online: http://www.ec.gc.ca/cas-aqhi/default.asp?Lang=En

See also the Provincial Air Quality Index, available online: http://www.airqualityontario.com/science/aqi_description.php

See also the Ministry of Environment website on air: http://www.ene.gov.on.ca/environment/en/category/air/index.htm

## WHAT CAN I DO AT A PERSONAL LEVEL TO REDUCE MY EXPOSURE TO OUTDOOR AIR POLLUTANTS?

- Check daily air quality forecasts for your city/town and plan your activities accordingly. Avoid energetic outdoor activity when air pollution levels are high and especially in the morning or late evening and during smog warnings.

- If possible, avoid walking or biking in heavily trafficked areas, especially during rush hour
- Reduce/eliminate outdoor activities during smog warning
- close windows and doors during peak traffic hours
- Take public transit (vs. drive)

- Avoid housing near busy roads and highways

**What can if I have pre-existing respiratory problems?**

In some cases, extra precautions should be taken. Sensitive populations included people with existing respiratory or cardiovascular conditions, children, the elderly, as well as others that have existing illnesses, disease or heightened sensitive.

To determine if you are considered a member of an 'at risk' population, please consult the Air Quality Health Index, online: http://www.ec.gc.ca/cas-aqhi/default.asp?lang=En&n=8727DF6F-1

**What can I do to reduce air pollution?**

- Avoid driving, and choose instead other modes of transport, such as biking, cycling, walking or using public transport
- If driving is necessary:
  - consider car pooling
  - adopt a style of driving that reduces emissions (i.e., reduce speed and avoid rapid accelerating, drive within the speed limit, and turn off your engine while stationary.
  - maintain your car (to ensure the engine and filters are in good condition and check tire pressure)
  - use car-sharing, if available
  - use a low-emissions car
- Reduce your energy consumption.
- Buy locally produced products

## LEGAL TOOLS: ACCESSING INFORMATION AND PUBLIC PARTICIPATION

The regulation of outdoor air contaminants includes the involvement of both the federal and provincial governments. While the jurisdiction of the provincial government includes the establishment of regulations to prevent harm to human and ecosystem health, to prevent discomfort and loss of enjoyment of property, and to prevent damage to the physical environment, the federal government's jurisdiction requires it to undertake research, enter into treaties, control transboundary air pollution and set standards to protect public health and safety.

Information on the emission of air pollutants can be accessed via Pollution Watch, the National Pollutant Release Inventory (NPRI), and the Environmental Bill of Rights (EBR), all of which are discussed in greater detail below. These tools allow members of the public to access information (i.e., people can use the NPRI to access information about local industry emissions) as well as have their voice heard (i.e., by submitting comments under the *Environmental Bill of Rights, 1993* (EBR) with regards to proposals for Environmental Compliance Approvals (formerly Certificates of Approval. Please see

Chapter 13 for a more detailed explanation on opportunities for public participation under the EBR).

- ***Canadian Environmental Protection Act* (CEPA)**

Members of the public can access information and participate under the *Canadian Environmental Protection Act* (CEPA) (http://laws-lois.justice.gc.ca/eng/acts/C-15.31/). The CEPA Environmental Registry provides information on how the federal government administers CEPA and how the public can participate in the consultation and decision making processes under the Act. Information on regulations, notices, orders, permits, and policies, etc. can be accessed via the CEPA Registry. The Registry can be accessed here: http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=D44ED61E-1.

In terms of participation, any individual may, among other things, file a 'notice of objection' to (a) a proposed order or regulation, (b) a decision to not place a substance on a list of toxic substances to be regulated, (c) the issuance of a permit, or (d) a decision to change the terms and conditions of an existing permit. Further, interested parties have the opportunity to formally appeal a decision or proposed regulation and have the complaint registered. [32] For more information on opportunities for engagement under CEPA please see Part IV, Chapter 18 fact sheet series on CEPA.

- **Ontario's *Environmental Protection Act* (EPA)**

Ontario's Environmental Protection Act (EPA) is a principal statute governing air quality in Ontario. It establishes a general prohibition against discharging contaminants into the natural environment in excess of the amounts permitted by the regulations. [33] O. Reg. 419/05 deals specifically with the release of air contaminants.

Under the *Open for Business Act*, 2010, a new two-tiered, streamlined approval process has been created. As a result, certain activities and sectors, (designated through regulation), will now no longer be required to formally apply and obtain a Certificate of Approval from the Ministry of Environment (MoE). Activities considered "low risk" or "less complex" or those that have "standard requirements" will be able to register their activity on an online registry, the Environmental Activity and Sector Registry (EASR). [34] A guide to applying for an ECA is available via the MoE website: http://www.ene.gov.on.ca/environment/en/resources/STDPROD_090552.html

Members of the public can access information on activities that qualify for the registration process via the online registry. For activities that require an ECA, which are subject to the EBR notice and comment provisions. For more information on these please see Part IV Chapter 26 for a fact sheet on the Ontario EPA or Chapter 12 which addresses the EBR.

Other Ontario legislation that provides opportunities for the public to engage on issues of air quality and pollution include: the Ontario *Environmental Assessment Act*, and the *Toxics Reduction Act*. For more information on environmental assessments, please see

Part III, Chapter 13, and for additional information on the *Toxics Reduction Act* please see Part IV Chapter 25.

## OTHER AVENUES FOR CHANGE

In addition to the above legal tools for accessing information and public participation, there are a variety of other ways in which members of the public can effect change. These include:

- Contact local industrial facility owners/managers (or the MOE) and ask for invitations to public meetings and request notice if there are approval or other changes underway. It is best to do so early and in writing.
- Encourage your policy makers / local authorities to diminish air pollution
- Encourage your policy makers / local authorities to encourage a decrease in reliance on motor vehicles by promoting alternative mode of transportation such as walking, biking, and public transportation.
- Advocate for change to Ontario's air pollution approval system, and request, enforceable standards for cancer causing-chemicals and for the consideration of cumulative and synergistic effects.
- Lobby your municipality for a right to know by law
- Join a campaign to promote change (see for example the Good Neighbour Campaign of the Toronto Environmental Alliance, Environmental Defence and Environment Hamilton: http://www.torontoenvironment.org/goodneighbour/intro)

See the Case Study at Chapter 33 for more information on what you can do if you're concerned about industrial air emissions in your community.

# CHAPTER 7: FOOD SECURITY

Food insecurity, or the lack of accessible and affordable nutritious food, is a widespread problem and takes many forms. "Food security" refers to:

- Food availability: sufficient quantities of food available on a consistent basis throughout the year
- Food access: physical and economic access to sufficient, safe, and nutritious food
- Food use: appropriate use based on knowledge of basic nutrition and care, as well as adequate water and sanitation [35]

In 2009, one sixth of the world's population (1.02 billion) were food insecure.[2] While severe food insecurity in Canada rarely reaches the form it takes in many developing countries, many Canadian households lack food security. Estimations of food security in Canada take the continuum of food insecurity into account, including both quantitative compromises (i.e., the lack food and associated feeling of hunger) and qualitative compromises (i.e., in food selection and consumption, including the compromise of quality or food preference, and associated anxiety around food sufficiency).

In 2007 - 2008, 7.7% (961,000) of Canadian households were food insecure, and 1.92 million Canadians aged 12 or older lived in food-insecure households.[36] In Ontario, according to 2005 statistics, 7.6 % of households were food insecure.[37]

The existence of food insecurity in Canada is evidenced by:

- the high number of people using food banks;
- the financial problems of farmers and fishers and their communities;
- diabetes rates among aboriginal people;
- widespread obesity in children and adults; and
- pollution and habitat destruction associated with the food system.

Food insecurity can have negative impacts on a person's physical and emotional health as well as quality of life, and is most prevalent among vulnerable communities, including:

- low-income families with children,
- low income households,
- households dependent upon social assistance,
- single parent families, and
- on and off-reserve Aboriginal peoples.

Poverty reduction, social justice and sustainable food systems are essential conditions for food security in Canada.

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[2] "Increasing Food Security: CIDA's Food Security Strategy", online: http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLUImages/Youth-and-Children/$file/food-security-strategy-e.pdf

**Canada's Action Plan**

The Rome Declaration on World Food Security and the World Food Summit Plan of Action in 1996 called for each nation to develop and implement a national plan of action to achieve food security domestically and internationally. Canada's Action Plan for Food Security (1998), which was prepared in response to the World Food Summit Plan of Action, is available online: http://www.agr.gc.ca/misb/fsec-seca/pdf/action_e.pdf

FOR MORE INFORMATION

For the full Health Canada Survey "Income-Related Household Food Security in Canada", see online: http://www.hc-sc.gc.ca/fn-an/surveill/nutrition/commun/income_food_sec-sec_alim-eng.php
For more information see the website of Food Secure Canada (FSC): http://foodsecurecanada.org/

See also: World Health Organization, "Trade, Foreign Policy, Diplomacy and Health: Food Security", online:,http://www.who.int/trade/glossary/story028/en/

For more information on food security issues at the national level, see the Food Secure website, http://foodsecurecanada.org/

**AVENUES FOR CHANGE**

- Consider joining a campaign. See for instance the "Put Food in the Budget" Campaign: http://www.povertywatchontario.ca/put-food-in-the-budget/

- Keep up to date, network with others working on improving food security, and offer your support. Food Secure Canada (FSC) helps create opportunities for its members to address the problems associated with food insecurity in local, national and international arenas. Via the FSC website members of the public can access a calendar of events, post campaigns, connect with the national food movement, and share information and learn from others about northern food security, urban gardening, local procurement, etc. For information on how members of the public can become involved, see: http://foodsecurecanada.org/get-involved

For organizations that work provincially see: http://foodsecurecanada.org/provincial-food-security-networks

For information on national networks working to advocate for food security, see: http://foodsecurecanada.org/our-extended-network-and-partners

# CHAPTER 8: GREEN ENERGY

## *GREEN ENERGY ACT*

On May 14, 2009, the Ontario government passed the *Green Energy Act*. This Act is part of the Ontario government's overall Climate Change Action Plan, and is intended to promote energy conservation and efficiency; create "green" employment and investment; and facilitate the development of projects using renewable energy sources such as: water, solar, wind, biomass, and biogas.

Some features of the Act include:

- establishment of a "Feed-in-Tariff" program (allows persons and companies to sell renewable energy to the provincial grid at guaranteed rates)
- creation of a new streamlined approvals process for renewable energy projects;
- establishment of domestic content requirements for wind and solar projects;
- creation of the Renewable Energy Facilitation Office

The Act amends or repeals over a dozen provincial laws, including adding new language to the *Environmental Protection Act* (EPA) to create an integrated approvals process for renewable energy projects, and includes public/proponent rights of appeal to the Environmental Review Tribunal.

A new regulation under the EPA (O.Reg. 359/09) has been passed to establish siting and noise standards, setback distances, natural heritage protection, public/First Nation consultation requirements, documentary requirements (i.e., bird/bat studies), and other approval-related matters. [38]

### What are Renewable Energy Approvals (REA)?

The *Green Energy Act* has created an integrated approvals process, transferring renewable energy projects from existing environmental approval and permitting requirements, and instead requiring projects to obtain a comprehensive "renewable energy approval" from the Ministry of the Environment (MOE).

Amendments to the *Planning Act* exempt renewable energy projects from various by-law and permit requirements.

Most applications for an REA require a core set of reports, often including the following: a project description report, a construction plan report, a design and operations report, a decommissioning plan report and a consultation plan report. Additional documents will be required depending on the project details (i.e., location, equipment, technology, etc).

Drafts of technical reports, among others, must be made available to the public by the applicant at least 60 days prior to the date of their final public consultation meeting, which must occur prior to submission of an application for an REA.

With respect to Wind Energy Facilities, "small wind" facilities (wind turbines generating more than 3 kW but less than 50 kW) require an REA, however, the requirements are scaled down to reflect the low-impact nature of the facility (i.e., no minimum setback requirements).

Wind facilities generating 50 kW and over require an REA and need to meet noise requirements and/or setbacks. Most wind facilities with wind turbines over 50 kW must meet a minimum 550 metre setback from residences and other noise receptors. If the sound power level of the turbine is less than 102 dBA (decibels), the 550 metre setback does not apply, and the project will be evaluated on a site-specific basis.

In the absence of an agreement with the land owner, large scale turbines must meet a setback equal to the height of the wind turbine (approx. 80m from property lines). The property setback can be reduced to the length of any blades of the turbine, plus 10 metres (approx. 50m) ***if*** the applicant submits a report (part of an application for an REA) that demonstrates that the proposed location of the wind turbine will not result in adverse impacts on nearby business, infrastructure, properties or land use activities and that appropriate preventative measures are in place (e.g. mechanical controls).

For more information see:
http://www.ene.gov.on.ca/environment/en/subject/renewable_energy/index.htm or the

EBR Registry Regulation Decision Notice - http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTA2NDQ5&statusId=MTYxMzcx

**Do developers have to consult?**

Consultation is mandatory for most projects seeking an REA, and begins with a notice of the proposal to engage in a project. The proponent must provide this notice to landowners within 120 metres of the proposed project location and must also place a notice in the local newspaper. Proponents must hold a minimum of two community consultation meetings in each local municipality or near the project location if the proposed location is in an unorganized territory.

Consultation with the municipality (or municipalities) is required for most renewable energy projects and must begin at least 90 days prior to the date of the final public consultation meeting.

Applications for most renewable energy projects will document what was learned through public consultation, including how the project was changed in light of this information.

Aboriginal consultation is a regulatory requirement for those applying for an REA for most renewable energy projects. The nature of the required consultation varies depending on the project. The applicant is encouraged carry out an Aboriginal Consultation Plan, including giving notice to Aboriginal communities early in the planning stages and making best efforts to meet with them.

Note, that small scale wind projects (generating less than 50 kW) are not subject to the public meetings or municipal consultation requirements of the Regulation.

The REA is a prescribed instrument under the Environmental Bill of Rights (EBR) and when the Ministry undertakes a review of an application a proposal notice will be posted for public comment on the Environmental Registry. You can access the registry online: http://www.ebr.gov.on.ca/ERS-WEB-External/

For more information see:
http://www.ene.gov.on.ca/environment/en/subject/renewable_energy/index.htm or the EBR Registry Regulation Decision Notice - http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTA2NDQ5&statusId=MTYxMzcx

**What can I do if I disagree with the decision to issue/renew an REA?**

A third party (a party other than the applicant and the Director - for example, a neighbouring homeowner) can request a hearing before the Environmental Review Tribunal (ERT) with regards to the Director's decision to issue or renew an REA.

To do so, the third party must submit a request to the ERT within 15 days of Director's decision being posted on the EBR Registry. The test for a hearing is: whether engaging in the project in accordance with the REA will cause "serious harm to human health, or serious and irreversible harm to plant life, animal life, or the natural environment." If ERT finds this to be the case, the ERT can revoke or amend the REA.

There is limitation period (time limit) for a third party appeal of an REA decision. Certain cases are exempt from this limitation period. For more information on this limitation period and whether it applies to you, see: http://www.ene.gov.on.ca/environment/en/subject/renewable_energy/index.htm or the EBR Registry Regulation Decision Notice - http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTA2NDQ5&statusId=MTYxMzcx

## LOW INCOME ENERGY ISSUES

**What is energy poverty?**

While everyone is affected by the rising costs of energy, low-income households are hit the hardest, often paying a very high percentage of their overall income on energy costs.

"Energy poverty" is a term used to refer to the disproportionate burden of electricity, natural gas and other utility costs on low-income households which reduce household funds available to cover the costs of food, clothing, medicine and other basic necessities.

Energy is needed in order to adequately heat homes, prepare food and live in safe conditions. The combination of high energy costs and low incomes has negative repercussions on health. Both cold winter temperatures and extreme summer heat can force low-income families to have to choose between food, clothing, and paying their energy bills. Having to choose between such basic necessities often leaves low-income households unable to afford the high cost of energy, and living in moderate to extreme discomfort.

Various types of low-income energy programs are available in Ontario, and include:

- Emergency assistance programs (provide financial assistance in emergencies such as an impending energy service cut-off or eviction);
- Energy efficiency programs (reduces amount of energy required)
- Consumer protection and education initiatives

FOR MORE INFORMATION

For more information on extreme heat and cold, see Halton Region's factsheets on heat alerts: http://www.halton.ca/cms/one.aspx?portalId=8310&pageId=13692 and cold alerts: http://www.halton.ca/living_in_halton/public_health/environmental_health/air_quality__outdoor_/cold_alert/

For more information on low income energy poverty and what you can do to help end energy poverty in your community, see the Low Income Energy Network's Toolkit: http://www.lowincomeenergy.ca/wp-content/uploads/2011/05/LIEN_manual_May-27_FINAL.pdf

HOW CAN I SAVE ON ENERGY BILLS AND LOWER MY UTILITY BILLS?

The Low Income Energy Network (LIEN) has created a Low Income Energy Toolkit which was developed in order to provide service providers and low income consumers with information about energy poverty and give them useful tools to work on this issue within their community. You can access a copy of the LIEN toolkit at http://www.lowincomeenergy.ca/wp-content/uploads/2011/05/LIEN_toolkit_May-27_FINAL.pdf.

As part of the toolkit, LIEN has drafted a list of conservation tips. Conserving energy in your home is an easy way to reduce your energy costs and save you money! Below, you will see the conservation tips as they appear on pages 44-45 of the LIEN Low Income Energy Toolkit:

**Lighting**

· Take advantage of natural light as much as possible.
· Turn lights off when room is not in use.
· Replace incandescent bulbs with energy-efficient compact fluorescent lights (CFLs), which are four times more efficient and last about eight times as long. They are more expensive to buy but will save you money in the long-term.
· Dust bulbs regularly. A clean bulb is brighter.
· Use LED holiday light strings instead of incandescent light strings.
· Consider task lighting where needed instead of lighting an entire room.
· Use lower wattage lights where you need them instead of lighting up the whole room.

**Laundry**

· Wash laundry in cold water. This does just as good a job, keeps your colours bright, and saves lots of energy.
· Dry your clothes outside or use an indoor rack set near a sunny window that you can open during the summer. The extra humidity will make your house more comfortable in the winter.

· If you use a clothes dryer, clean the lint trap after every load, and make sure the vent isn't blocked.
· Take clothes out of the dryer and fold them while they are still warm to prevent wrinkling; your iron uses a lot of energy.
· Operate dryer with full loads.
· Time washing/drying cycles so dryer drum stays warm when changing loads.
· Select correct water level for load size when washing.

**Cooking**

· Use a microwave or a toaster oven instead of the oven to heat up, toast or cook small amounts of food.
· Use an electric kettle for boiling water, instead of a pot on the stove.
· Turn off the stove top or oven before you're finished cooking as the retained heat will keep things cooking for several minutes.
· Use pots the same size as the element, and always use lids.
· Turn on oven light and look through glass window instead of opening door to check food.

**Dishwasher**

· Washing dishes by hand in a sink (without the water running) and rinsing them in a basin of cold water is the most energy-efficient way.
· Use cold water to rinse dishes.
· Only run dishwasher when full.
· Use dishwasher's shortest cycle.
· Air dry rather than use dishwasher's heat dry feature.

**Taps and showerheads**

· Take short showers instead of baths. A five-minute shower uses about half as much water as a bath.
· Install a faucet aerator to save on both water and water heating costs
· Install low-flow showerheads and low-flow toilets to reduce water consumption.
· Repair or replace leaky faucets and toilets.

**Kitchen: Fridges and Freezers**

· Try to avoid standing with the fridge door open.
· Do you really need that second older fridge?
· Vacuum coils on back and/or under fridge regularly.
· Make sure there is enough air space between fridge coils and wall.
· Don't overfill fridge - it impedes air flow causing the fridge to run more frequently.
· Keep freezer as full as possible – it works more efficiently that way.

**Space heating and cooling**

· Install a programmable thermostat to manage the amount of energy used to heat and cool your home, especially when you are not home and at night while you are sleeping.

· In the winter, open curtains/blinds during the day to let in the sun and close them at night to keep the heat in.
· In the summer, open your windows at night to allow cooler air in, and close them and any curtains/blinds during the day to keep the sun out.
· Keep doors and windows closed when heat or air conditioning is on.
· Use fans instead of air conditioners.
· Put removable, temporary caulking on the inside of your windows that you can peel off in the spring.
· Set ceiling fans to force air down in summer and up in winter.
· Keep lamps, televisions, and other heat-producing appliances away from thermostats – they make air conditioners work overtime.
· Clear away anything blocking heating and cooling vents.
· Replace or clean furnace filters regularly.

**Around the House**

· Use a power bar for all computers, entertainment and peripheral devices to shut down and power off all equipment when not in use.
· Reduce "standby power" (the energy used while an appliance is switched off or not performing) at home and at work. The easiest way is to unplug appliances that are not being used.

## POLICY DEVELOPMENTS

### What are the law and policy developments in the area of energy poverty?

Low-income Energy Assistance Program (LEAP)

The Ontario Energy Board (OEB) has recently established the Low-income Energy Assistance Program (LEAP). LEAP has three components:

- Emergency financial assistance (rolled out in January 1, 2011)
- More flexible customer service rules for low-income consumers (came into force on October 1, 2011)
- Targeted energy conservation programs offered by gas and electric utilities (staggered rollout)

For more information about LEAP, see the Low Income Energy Network's website for webinars: http://www.lowincomeenergy.ca/

## LEGAL TOOLS: ACCESSING INFORMATION AND PUBLIC PARTICIPATION

***Energy Consumer Protection Act, 2010***

The *Energy Consumer Protection Act, 2010* (ECPA) which came into force on January 1, 2011, provides residential energy consumers with greater protection when it comes to

contracting for the purchase of electricity and natural gas, and enables the Ontario Energy Board (OEB) to oversee industry practices and enforce the new conduct rules. The Act can be accessed online: http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_10e08_e.htm

More information on the impact of the Act on low-income households can be found through the Low Income Energy Network's website: http://www.lowincomeenergy.ca/and the Ontario Energy Board's website: http://www.ontarioenergyboard.ca/OEB/Consumers/Energy+Contracts/Energy+Consumer+Protection+Act+2010

***Green Energy Act, 2009* (GEA)**

The Green Energy Act, SO 2009, c. 12 Sch A (GEA), discussed above, is part of Ontario's plan to become a leading green economy in North America. In addition to its role in increasing growth in clean and renewable energy sources, the GEA has a positive impact on reducing energy poverty in that it is intended to:

- Create the potential for savings and better managed household energy expenditures through a series of conservation measures.
- Establish targeted conservation measures to protect low-income Ontarians from increases in energy prices.
- Require the OEB to collect assessments to fund conservation or renewable energy programs aimed at:
    - reducing consumption of various fuels (natural gas, electricity, propane, oil, coal and wood) and
    - at a specific geographical, social, income or other sector of Ontario.

The GEA can be accessed online at: http://www.canlii.org/en/on/laws/stat/so-2009-c-12-sch-a/latest/so-2009-c-12-sch-a.html

More information on green energy and energy poverty can be found online through the Low Income Energy Network (http://www.lowincomeenergy.ca) and the Canadian Environmental Law Association (www.cela.ca).

# CHAPTER 9: BROWNFIELDS

**What are brownfields?**

Brownfields are vacant and unused lands which may be contaminated because of their former industrial use. These sites are found all across Ontario, in rural and urban communities. In the last decade, there has been a push from municipalities and the province to redevelop these sites for new uses. Redevelopment is important as it reuses land and utilizes existing infrastructure, services and resources.

In the last several years there have been several important changes to the regulation of Brownfields in Ontario:

- In 2004, the *Brownfields Statute Law Amendment Act* and the Ontario Regulation 153/04 (Record of Site Condition Regulation) came into force
- In 2006, the Brownfields Stakeholder Group was created. CELA was a member of this group and participated in discussions about how best to address Brownfield redevelopment in Ontario.
- In 2007, Ontario passed the *Budget Measures and Interim Appropriation Act*, which identified barriers to Brownfield redevelopment, including barriers related to liability, financing and regulatory process
- In 2009, amendments were made to Records of Site Condition to implement reforms which had been announced by Ontario in 2007. These amendments will come into force on July 1, 2011

The Ministry of the Environment has established two standards when assessing contaminated sites - generic standards and site specific standards.

Generic standards are commonly known as ‘site condition standards’. Using this standard, one must consider all the ways that exposure to contamination can occur,

including consideration of physical conditions in the area. The Minister of the Environment has stated that this is a conservative approach.

Site specific standards are commonly known as the 'risk assessment approach'. This approach incorporates information about the specific conditions of a property when assessing the risk of contamination. This assessment may not include all the receptors considered in the more stringent generic standard.

There were several noteworthy changes made in the 2009 amendments to Ontario's regulation of Brownfields. First, the amendments provided clarity with respect to the process of redevelopment. Minimum requirements for conducting and supervising environmental site assessment were identified. The record of site condition submission process was also revised, and now includes a requirement that the Director make a decision 30 days after a completed record of site condition has been submitted. Additionally, a new streamlined risk assessment has been created as an alternative to meeting generic standards and the traditional risk assessment. This modified risk assessment can be prepared using a web-based "approved model" which can be adjusted to reflect the site conditions of a specific Brownfield. Finally, the amendments also update soil and groundwater standards to reflect improvements in science.

**What is a record of site condition?**

A record of site condition must be filed whenever property use changes from a less sensitive use to a more sensitive use (as determined under Part XV.1 of the EPA and O. Reg. 153/04). For example, if a property was previously used for an industrial use, and now the developer wishes to use it for residential housing, a record of site condition would have to be filed. The record of site condition provides certifications by "qualified persons" that a property meets the appropriate standard as described above (generic or site specific standard). This provides the developer with limited protection from certain ministry orders regarding clean up.
Risk assessment is an option for owners who want to file a record of site condition but the property does not meet the generic site condition standards. In this case, a risk assessment must be accepted the Ministry of the Environment in order for a record of site condition to be submitted.

## LEGAL TOOLS: ACCESSING INFORMATION AND PUBLIC PARTICIPATION

In some cases, before remediation, contamination from Brownfields may migrate off site and result in environmental damage and/or impact human health. In these cases, there are some actions you may wish to take:

- Contact the Ministry of the Environment and your municipality to report the off site impact

If you are concerned about Brownfield redevelopment in your community, there are several opportunities to gather information and get involved in the process of

redevelopment:

- You can find site specific risk assessments / proposals for certificates of property use on the Environmental Bill of Rights Registry
- You can access information about Brownfields under redevelopment on the Brownfields Environmental Site Registry (http://www.ene.gov.on.ca/environet/BESR/index.htm)
- You can participate in public consultations which are held in your community about the site redevelopment.
- You can look into whether your municipality has a community improvement plan to deal with Brownfields.
- Rezoning decisions are often required for Brownfield redevelopment. If this is the case, there are opportunities to become involved at the municipal level. For example, at the public meeting/open house regarding rezoning you can submit your comments. This is important, as submitting comments and participating at these public meetings preserves your right to appeal a rezoning decision to Ontario Municipal Board (www.omb.on.ca) (see Chapter 9 for further details about this process).

If you are concerned about a risk assessment, remediation, or record of site condition in your community, there are several actions you can take:

- Contact the Ministry of the Environment Enforcement Branch to make a report
- If there is a clerical error with the record of site condition, contact the Environmental Assessment and Approvals Branch of MOE which has responsibility for the electronic site registry
- If there are technical concerns about how the risk assessment process or the remediation is proceeding, notify the District or Regional office and/or Approvals branch of the Ministry of the Environment.
- If a violation is suspected (for example, that the record of site condition contains information which is false and/or is intended to mislead the Ministry), contact the Investigations and Enforcement Branch (IEB) office in the district or regional office of MOE or alternatively the main IEB office in Toronto which can direct you to the correct local office.

See the Case Study at Chapter 34 for more information on what you can do if you're concerned about brownfield remediation in your community.

# CHAPTER 10: TOXICS IN CONSUMER AND PERSONAL CARE PRODUCTS

Everyday, we use personal care products - such as shampoo, soap, perfumes and creams - exposing ourselves to hundreds of chemicals from these products. Many of these products contain chemicals that we know are not healthy, and many contain chemicals that have not even been assessed for safety.

We are exposed to chemicals and toxins from different sources everyday – particulate matter in the air we breathe, pollutants in the water we drink, and chemicals in the food we eat. In addition, chemicals are entering our bodies from the personal care products we use on a daily basis. Most of us likely use several of these products daily, and when you add them up our cumulative exposure can be quite high.

There are many chemicals of concern in personal care products. For example, some chemicals in personal care products can mimic human hormones. These chemicals can act like estrogen in our bodies and some studies have shown a link between these kinds of chemicals and breast cancer. Additionally, other chemicals used in personal care products may be carcinogenic or act as endrocrine disruptors (affecting fetal and childhood development).

**How is Canada regulating cosmetics?**

The sale of cosmetics in Canada is regulated under the *Food and Drug Act* and the Cosmetics Regulations, which fall under the auspices of the federal Minister of Health. The ingredients found in most personal care products, however, are often regulated by industry.

Health Canada has developed a Cosmetic Ingredient Hotlist which includes prohibited and restricted cosmetic ingredients. If a cosmetics contains a Hotlist Ingredient, Health Canada may advise the makers to:

1. Remove the ingredient,
2. Reduce the concentration of the ingredient
3. Consider marketing the product as a drug
4. Provide evidence that the product is safe for its intended use
5. Confirm that the product is labelled properly
6. Confirm that the product is sold in child resistant packaging

**What about preventing exposures in the first place?**

Increasingly health, environmental and workers groups are advocating together for new laws, policies and programs that prevent exposure to harmful substances and toxins in the workplace, environment and in products. We are in the beginnings of a movement that has been termed “Green Chemistry” that is developing globally, across Canada and here in Ontario.

Some businesses, industry and regulators are responding to public right to know campaigns based on the belief that pollution prevention is also health protection. Consequently, a movement is growing to seek safer substitutes, cleaner processes and alternatives to the use of toxins and the greening of manufacturing supply chains. Green economists are now attributing values to avoided future health costs, the benefits to society in preventing chronic diseases such as cancers by eliminating exposures to carcinogens. This movement is just beginning and as it gains public support more investments will be made in these transformative laws and policies.

WHAT CAN I DO TO PROTECT MYSELF?

- Get informed! Read the ingredient labels on your products. Become familiar with Health Canada's Hotlist and use on line tools (such as the Skin Deep database) to learn more about the safety of your personal care products.
- Share what you have learned with your family and friends.
- Try to limit your use of cosmetics and personal care products whenever possible. In particular, avoid perfumes, as they contain multiple chemicals often listed only as "fragrance"
- Write to your Member of Parliament and voice your concerns about the safety of these products and push for stronger cosmetic ingredient regulations
- Make your own all natural products at home.

**LEGAL TOOLS: ACESSING INFORMATION AND PUBLIC PARTICIPATION**

Under the *Food and Drug Act*, member of the public can:

- Call for additional labelling
- Seek credible lists of substances of concern
- Provide input to the regulation making process (for example, whether a particular ingredient should not be allowed to be used in cosmetics)

**OTHER AVENUES FOR CHANGE**

You can learn more about the products you are using by visiting the Environmental Health Association of Nova Scotia's Guide to Less Toxic Products: http://www.lesstoxicguide.ca/ which provides information about the risks associated with various chemicals and offers a list of safer products to choose from. Another useful resource is the Skindeep Cosmetic Database (http://www.ewg.org/skindeep/) which contains the ingredients and degrees of safety of thousands of popular products.

Many other organizations are working on the issue of toxics in personal care products, and offer helpful information. These include Environmental Defence (http://environmentaldefence.ca/campaigns/just-beautiful) and the David Suzuki Foundation (http://www.davidsuzuki.org/issues/health/projects/whats-inside-that-counts/)

If you're interested in learning more about Green Chemistry by:

- Joining the Great Lakes Green Chemistry Network who have regular free webinars on developments in green chemistry http://www.glgc.org/
- Learning about green technologies being developed here in Kingston, Ontario http://www.greencentrecanada.com/
- Using the Green Screen tools developed by Clean Production http://www.cleanproduction.org/Home.php

# CHAPTER 11: IMPORTANCE OF PUBLIC PARTICIPATION

Public participation is a very important part of the environmental decision making process. When local communities and individuals are engaged in local decision making, it ensures that a broad array of views and concerns are reflected in the development of new laws and approvals. Additionally when the public participates, and feels that their concerns were taken into account by the decision maker, government decisions have a greater air of legitimacy and are often accepted more easily by the community.[39]

Public input can also provide decision makers with very important information of which they may not have previously been aware. This includes information about local conditions and circumstances, as well as environmental violations due to past the behaviour of companies. Public participation is necessary to ensure that the government has all the information necessary to make a decision.[40]

Indeed, governments have noted the importance public participation in legislation at all levels of government. Federal legislation has enhanced the public's substantive and procedural rights to participate in environmental decision making in the *Canadian Environmental Assessment Act* and the *Canadian Environmental Protection Act*. In the Ontario context, public participation has been incorporated into numerous pieces of legislation including the *Environmental Bill of Rights* and *the Environmental Assessment Act.* You can learn more about these pieces of legislation in Chapter X and X of this toolkit.

Despite its significance, public involvement in environmental decision making can by limited by a number of factors. For example, much of the information about opportunities to get involved is available on line registries. While this does provide up to date information, some individuals and communities do not have access to the internet. Additional limiting factors may include the location and accessibility of reports and proposal and a lack of technical expertise.

# CHAPTER 12: ENVIRONMENTAL BILL OF RIGHTS

The *Environmental Bill of Rights*, or the EBR for short, is an important Ontario law. Protection of the environment is a primary purpose of the Act and it includes many provisions which allow the public to participate in significant environmental decisions in their communities. The EBR applies to environmentally significant decisions and proposals, such as permits and licenses, made and provided by the prescribed Ontario Ministries and under the prescribed Acts. These include ministries such as the Ministry of the Environment and the Ministry of Natural Resources. You can find an up to date list of the prescribed ministries on the Environmental Commissioner's website at www.eco.on.ca.

The EBR is a useful tool for you because it allows you to participate in environmental decisions and helps you hold the government accountable for their decisions. For example, if a smoke stack is being constructed near your home, you may wish to use the registry to inquire about possible certificate of approval for air emissions; or if a company is planning to take water from a water source in your community, you may wish to search the registry to search for a possible permit to take water.

Note: With Bill 68, the *Open for Business Act, 2010,* changes have been made to the approvals process under the *Ontario Water Resources Act* and the *Environmental Protection Act.* As a result, certain activities and sectors, (designated through regulation), will now no longer be required to formally apply and obtain a Certificate of Approval from the Ministry of Environment (MoE). Certain activities will be able to register their activity on an online registry, the Environmental Activity and Sector Registry (EASR). [41] Activities that do not qualify for registration will require an Environmental Compliance Approval (ECA), formerly a Certificate of Approval (C of A), which are subject to the EBR notice and comment provisions. For more information on these changes please see Chapter 6 on Air Pollution and Air Approvals, or "Environmental Approvals and Approvals Reform." [42]

**How can I use the EBR?**

The *Environmental Bill of Rights* provides a number of avenues to increase public participation in government decision making. The first is the introduction of the *Environmental Bill of Rights* Registry. The Registry can be accessed on line at www.ebr.on.ca and is meant to provide notice to the public of environmentally significant decisions and to provide comment opportunities in relation to new statutes, regulations, policies and instruments. For example, if a proponent is requesting a permit to undertake environmentally significant activity from a prescribed Ministry, the public will be notified via the Registry.

**How can I search the EBR Registry?**

You can search the registry by EBR number - every posting is assigned an individual number that can be used to identify it in correspondence with the Ministry or others. This

reference number is a unique identifier and is useful to cite when contacting the Ministry about a particular posting.

You can also search the registry by keyword. A useful method to search the registry is by place name or proponent name.

Once you have located a posting, the notice will indicate the length of the comment period. It is very important that if you wish to submit comments, you do so by the prescribed deadline. This will ensure that your concerns are taken under consideration by the Ministry when the Director makes his/her decision on the permit/license. The notice will also sometimes provide you with links to relevant documentation. Alternatively, you can access this information by getting in touch with the contact person listed on the Registry. In some cases, however, you may have to go to the office to view the relevant documentation on site.

**How does the EBR work?**

The EBR requires that government give notice to the public (via the EBR registry) of requests by industry for issuance of approvals, permits, or licenses. The public has a right to comment on these proposals before they are approved. Your comments must be considered by the decision maker before he makes his decision. If approved, the public may apply for leave to appeal.

*Request for Leave to Appeal*

A resident of Ontario may seek leave to appeal the decision of a Minister with respect to some permits and licenses, if among other requirements, they are have an interest in the decision. A person is automatically deemed to have an interest if they have submitted comments on a proposal through the EBR Registry. An individual must submit their leave to appeal application within **15 days** of the notice of the decision being posted on the Registry. It is worth noting, that the application is for leave to appeal only – that is, permission to appeal. This means there is no automatic right of appeal to the Tribunal. You must first be granted leave and then you can proceed to a full hearing.

In order to be granted leave, the applicant must meet a two part test. First, they must show that there is good reason to believe that no reasonable person having regard to the government policies could have made that decision, and second that the decision could result in significant harm to the environment. This is quite an onerous test to meet, particularly so because of the tight timeline to file the application. If you are thinking about proceeding with a leave to appeal application, you may want to seek legal advice early in the process.

*Request for Review*

Part IV of the EBR allows any two Ontario residents to request either a review of an existing policy, Act, regulation or instrument, or the development of a new policy, Act,

regulation or instrument. The request is sent to the Environmental Commissioner of Ontario who then will pass on the request to the appropriate Ministry. After considering the request, the Ministry will decide whether or not to undertake a review. For example, if there is a permit or license which was issued some time ago and you are concerned that it is not sufficient to protect the environment, you can request a review of that instrument.

*Request for Investigation*

Part V of the EBR provides that two Ontario residents can request a government Ministry's investigation of an alleged violation of environmental law. Once again, the request is made to the Environmental Commissioner of Ontario who then forwards this request on to the appropriate ministry. The Minister then decides whether or not to undertake an investigation. Interestingly, the public has requested few investigations since the EBR came into force and the Ministry of the Environment has granted even fewer.

*Right to Sue*

Section 84 of the EBR creates a new cause of action, that is, contravention of law and significant harm to a public resource. According to Part VI of the EBR, any Ontario resident may bring an action against a person who has contravened, or will imminently contravene a prescribed Act, regulation or instrument when this contravention will cause significant harm to a public resource in Ontario. Before an action can be brought however, the resident must have first applied for an investigation under Part V of the EBR and received an unreasonable response. If a resident is successful in proving their cause of action, the remedies available include injunctions, negotiation of a restoration plan, declaratory relief, or other measures. Rarely, however, are monetary damages a possible remedy.

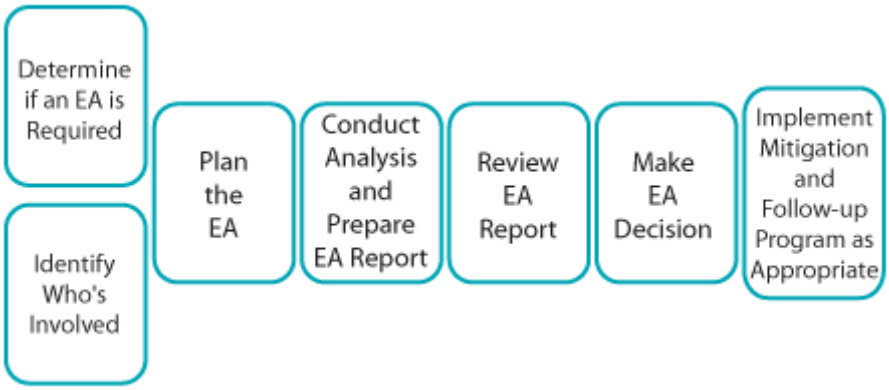
You can find a great deal more information about your participatory rights under the EBR at http://www.eco.on.ca/eng/index.php/environmental-bill-of-rights/about-the-ebr/your-rights-under-the-ebr.php.

# CHAPTER 13: ENVIRONMENTAL ASSESSMENTS

One of the primary goals of the environmental assessment (EA) process is to protect the environment. Ideally, the assessment process will help to eliminate, or at the very least, reduce any potential impact on the environment from a proposed project. In order to do this, the environmental assessment should predict the environmental effects of a proposed activity before work begins. While environmental assessments are meant to be undertaken as early as possible in the planning stages, it is not always the case.

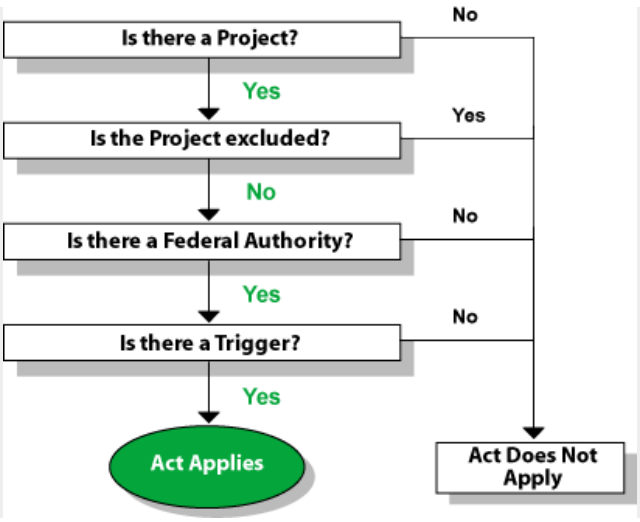
**What is the process for a federal environmental assessment?**

Federal environmental assessments are governed by the *Canadian Environmental Assessment Act* (CEAA) which can be accessed at http://laws.justice.gc.ca/en/C-15.2/. The Canadian Environmental Assessment Agency proposes the following EA process on their website (http://www.ceaa.gc.ca/default.asp?lang=En&n=B053F859-1#5):




In order to determine if an EA is required, we must look to the triggers contained in section 5 of CEAA. These include such things as the injection of federal money into the project or the involvement of a federal authority in carrying out the project, among others. There are a number of exemptions that you should be aware of as well. It is important to closely read the CEAA in order to determine if an EA is required. If an EA is triggered, the federal authority responsible for the EA will be identified as the responsible authority (RA).

The Canadian Environmental Assessment Agency has the following diagram on their website to help explain how they determine if an EA is required (http://www.ceaa.gc.ca/default.asp?lang=En&n=B053F859-1#5).




When the Agency plans the EA, they will scope the project and scope the factors which will be considered in the EA.

The analysis and EA report is preformed and prepared by an environmental assessment expert. This report is then reviewed by the RA and the RA may enlist others to review the report as well.

The RA then makes a decision with respect to the EA. If the proposal is to be carried out, the mitigation measures identified in the report are incorporated into the design plans and implemented with the project. A follow-up program might also be designed and implemented. This could be used to verify the results of the environmental assessment and to assess the effectiveness of the mitigating measures.

Once it has been decided that an EA is necessary, the government must then decide the type of EA required. An EA can be a screening, comprehensive study, or a review panel. You can read more information about the different types of environmental assessments on the Agency's website at http://www.ceaa.gc.ca/default.asp?lang=En&n=B053F859-1#5.

**How can I get involved in federal environmental assessments?**

In order to find out what opportunities are available for public participation, you can check out the CEAA Registry at http://www.ceaa-acee.gc.ca/050/index-eng.cfm. You can search this registry using a keyword search. Often searching the proponent's or the location of the project can also be useful. Additionally, a list of current opportunities for public participation under CEAA is available at http://www.ceaa-acee.gc.ca/011/participation_e.cfm. Once you have located a posting, you will see that a contact person is listed. In order to get more information on the EA, you can contact this person with your inquiries.

Your level of participation may be determined by the type of EA being carried out:

- Screening – Public consultation in a screening is at the discretion of the RA.
- Comprehensive Study – The Agency is responsible for conducting comprehensive studies and public participation is required as part of the EA process. The public must have an opportunity to participate in the early part of the process and must have an opportunity to review the report before any decisions are made on the project. Funding may also be available to assist the public in participating in a comprehensive study. You can learn which projects have participant funding available at http://www.ceaa-acee.gc.ca/011/participation_e.cfm.
- Review Panel – The public can participate in early meeting regarding scoping, and can also appear before the review panel in public hearings.

During the EA process, the proponent is encouraged to consult the public and Aboriginal groups in particular about the project.

For more information, see the CEAA website:
(http://www.ceaa.gc.ca/default.asp?lang=En&n=B053F859-1)

**What is the process for provincial environmental assessments?**

Environmental assessments in Ontario are governed by the *Environmental Assessment Act* (EAA) which can be accessed here: http://www.e-laws.gov.on.ca/Download?dID=42071

The EAA applies to most public sector proponents, such as provincial ministries or municipalities. Unfortunately, it does not apply to private sector projects unless the designated by regulation or the company voluntarily agrees to undergo an environmental assessment. Not surprisingly, this does not happen often.

In Ontario, there are different types of EA. In addition to individual EAs, there can also be streamlined EAs which include class EAs and projects covered under the electricity, waste management and transit regulations. The government notes that streamlined assessments are carried out when there are groups of projects that are carried out routinely and thus, have predictable environmental effects. The streamlined process is meant to provide a more efficient, economic and timely assessment, while still protecting the environment.

A proponent may apply to the Minister for approval of a class environmental assessment with respect to a class of undertakings, known as a class EA document. The class EA document establishes a streamlined planning process for proponents to follow in order to fulfil the requirements of the EAA. This is a self-assessment proponent-driven process where the proponent of a project is responsible for meeting the requirements in the class

EA prior to implementing a project. The class EA approach allows for evaluation of the environmental effects of alternatives to an undertaking and alternative methods of carrying out a project and includes mandatory public consultation requirements.

Currently, there are 10 approved class EA documents (e.g., Municipal Engineers Association class EA for municipal road projects). Approximately 90% of projects subject to the EAA are planned and implemented in accordance with a class EA. A project meets the requirements of the EAA if it is planned in accordance with the process set out in an approved class EA document and is not required by Order of the Ministry to complete an individual EA, or in other words is not "bumped up" to an individual EA. [43]

**Can I request that an individual EA take place instead of a class EA?**

Class EA processes allow any interested person, that has significant environmental concerns about a project, may request a higher level of EA study. Any interested person can write to the Director of the Environmental Assessment and Approvals Branch requesting that the project undergo an individual EA. This is called a 'bump up' request or a Part II Order request.

All 'bump up' requests are reviewed by the EA and Approvals Branch. Following consultation with the requester, the proponent and other interesting groups, the Minister makes a decision (usually between 30 and 66 days). In making his decision, the Minister will consider the purpose of the EAA, factors suggesting that the proposed undertaking differs from other undertakings in the class to which the class EA applies, the significance of these factors and differences, the nature of the concerns raised by the individual requesting the bump up, and the benefits of carrying out an individual EA.

The Minister has four options for a decision on a bump up request:

- deny the request
- deny the request with conditions
- refer to mediation
- grant the request and require the proponent to undergo an individual EA

**How can I get involved in the provincial EA process?**

Consultation is mandatory within Ontario's EA process. Proponents must consult with persons that may be interested in a proposed project throughout the EA process. Additionally, proponents must record how they consulted with the public and government agencies, identify the issues that were raised, and show how these issues and concerns were considered.

The Ministry of the Environment may also have to consult with persons who have an interest in a proposed project. This consultation will be carried out using the *Environmental Bill of Rights*. All comments received by the Ministry of the Environment during the public comment periods are considered by the Minister before making a decision about a proposed project.

It is important to get involved in the EA process and have your voice heard as early as possible to identify issues and concerns specific to a proposed project, before irreversible decisions are made.

**Are there special consultation procedures for the Aboriginal communities?**

Consultation with potentially affected Aboriginal communities is required. The proponents should work with the appropriate organizations to consult with the Aboriginal communities that are potentially affected by a project. During the consultation period, the proponent should discuss with the affected Aboriginal communities how to prevent or mitigate any potential adverse effects the project may have.

The Crown may also have a duty to consult with Aboriginal communities in order to satisfy the Crown's responsibilities concerning potential adverse impacts on Aboriginal or treaty rights. In this event, the approach to consultation will vary depending on the specifics of the proposed project.

For more information, see the MOE website: http://www.ene.gov.on.ca/environment/en/industry/assessment_and_approvals/environmental_assessments/index.htm

See also, CELA publication "Environmental Assessment in Ontario: Rhetoric vs. Reality" available online: http://s.cela.ca/files/766.LindgrenDunnFinal.pdf

# CHAPTER 14: ACCESSING POLLUTION DATA

Tracking pollution is a critical activity given the potential for serious & irreversible harm to human health and the environment from the release of pollutants. There are several ways to track pollution in your community and to learn more about the kind of air pollutants you may be exposed to.

**What are Pollutant Release and Transfer Registers (PRTR)?**

Pollutant Release and Transfer Registers allow governments to track and manage information about pollution. They can also provide members of public with information about pollution in their community, which can then be used when members of the public participate in government decision making. For the most part, PRTRs include information about pollutant releases to air, water and land, and also include waste transported to disposal sites.

The main components of a pollutant registry are 1) mandatory reporting of pollution releases and transfer data by polluters, 2) regularly updated data, 3) reporting on releases to air water and land and includes info re transfers for disposal and recycling, and 4) public assess to the information.

*Other Jurisdictions*

In the United States, the Toxics Release Inventory is used to track and manage information about pollution. You can search its online database at http://www.epa.gov/tri/index.htm. Also, the US based Scorecard website has a lot of information on the TRI, and provides detailed chemical profiles and up to date health effect information. You can access this website at: http://scorecard.goodguide.com/index.tcl.

The Commission for Environmental Cooperation (CEC) compiles data from the US, Canada, and Mexico's PRTRs and publishes the information each year in a document called "Taking Stock: North American Pollutants and Transfers". However, it is important to remember that Taking Stock only considers data common to all three PRTRs – about 60 chemicals and nine industrial sectors. This information is available on line at http://www.cec.org/Page.asp?PageID=924&SiteNodeID=569&AA_SiteLanguageID=1

**What is the National Pollutant Release Inventory (NPRI)?**

The NPRI is a publicly accessible database of pollutants released on site to the environmental or transferred for disposal or recycling and is updated each year. It is published by Environment Canada.

*Who reports to the NPRI?*

Facilities that report to NPRI include companies manufacturing, chemical products, primary metals, transportation equipment, rubber products, pulp and paper, food products, wood products, textiles, mineral products and electrical equipment.

Only certain facilities are required to report to NPRI. If the facility meets all three of the following requirement the owner must report to NPRI:

- The facility has 10 or more full time employees (20,000 hours worked)
- The facility manufactured, processed or used 10 tonnes or more of an NPRI substance during the calendar year
- The NPRI substance was manufactured, processed or used at a concentration of 1% or more by weight

However, some pollutants, such as mercury and dioxins, have special reporting requirements.

There are some facilities that are exempt even if they meet the criteria above, such as universities, schools, research organizations, retail, mining extraction activities, and dental practices. Still others who don't meet the threshold are sometimes required to report. For example, the employee threshold doesn't apply to waste incinerators, wood preservation operations or some wastewater collection systems. This is usually because they release small amounts of highly toxic pollutants.

There are some facilities that use chemicals in quantities too small that they are required to report to the NPRI. As a result, information on these facilities may not be available.

*What substances are reported?*

In 2009, 347 substances or substance groups were listed on the NPRI, and over 8400 facilities submitted reports on the substances that they released, disposed of, or sent to other facilities for recycling.

*What are CACs?*

CACs are a mixture of chemicals that combine with each other to create smog and acid rain. Many have been links to respiratory problems. When using the NPRI to track the release of CACs, you will see that only releases to the air are reported.

CACs tend to be reported in very large amounts. Sometimes these numbers can make the smaller amounts reported for other toxic pollutants look quite small. It's important to remember however that some toxic pollutants – such as mercury, dioxins and furans – can have significant environmental and health impacts even when released in small amounts.

*What are the limitations of NPRI data?*

Pollution Watch, a website which provides further information about NPRI data (available at: www.pollutionwatch.org), outlines the limitations of NPRI data (see http://www.pollutionwatch.org/tools/understandData.jsp#4_1.)

- Does not include all potential harmful pollutants – more than 23,000 substances on Environment Canada's Domestic Substance List
- Does not cover pollutants that have pesticide applications only
- Does not include greenhouse gases
- Generally does not include pollutants that fall under the threshold of 10 tonnes manufactured
- Does not include mobile sources such as cars, trucks, and construction equipment
- Does not include natural sources such as forest fires and erosion
- Does not include sources such as dry cleaners and gas stations
- Does not include exempted facilities
- Generally does not include smaller facilities
- Does not include information about risks of pollutants released or transferred
- Does not include information on exposures to people or the environment
- Does not include information about the amount of pollutants allowed to be released and transferred under permits regulations or agreements

**What is Pollution Watch?**

As noted earlier, Pollution Watch is a website which provides information about NPRI data. It provides information about companies emitting pollution in your community, the type and quantity of pollution being released, and the potential health risks.

Pollution Watch has several features that are unavailable on the NPRI website. For example, you can create a map of facilities that report pollution in your community, you can rank facilities across Canada based on type of pollution, you can create timelines to view pollution over various time periods, and you can create pollution summaries at the national or provincial level.

Currently the website is acting only as an archive of information up to 2006. While up to date information cannot be obtained through Pollution Watch, it can be helpful when considering historic pollution in your community.

Additionally, in order to properly interpret the data on the Pollution Watch website, it is important to understand how it differs from the data collected and organized by the NPRI. We strongly encourage you to review "Understanding the Data used on Pollution Watch" at http://www.pollutionwatch.org/tools/understandData.jsp in order to fully understand the results of your searches.

# CHAPTER 15: LAND USE PLANNING DECISIONS

Municipalities have an important role in land use planning in Ontario. Municipality responsibilities include determining the future development of the community through the preparation of official plans, zoning by-laws and other planning tools, and in so doing municipalities are bound by Ontario's provincial policies, plans and laws.

In order to make a change to a building or land use, property owners/developers are required to obtain appropriate permits and approvals from the municipality.

**How can I participate in land use planning in my community?**

You can become involved in land use planning decisions in your community. Public involvement will assist the municipal council to make better decisions for the future.

To participate, it is important to stay informed and up to date on new developments and changes in your community, and to participate at public meetings. When planning your participation, it is important to consult your municipality's Official Plan (and/or the zoning by-laws) as well as the *Planning Act*.

If you are concerned about a proposed zoning change, or by-law, you can attend and submit comments at public meetings. It is important to do so in order to preserve your right to appeal the decision to the Ontario Municipal Board (OMB).

If you are concerned about a proposed by-law or zoning change, you may also want to

- Acquire as much information as possible on the proposal
- Reflect on the proposal will impact you and your neighbours
- Attend and participate in public meeting and make sure you let the municipal council know your concerns. Make sure to submit your comments (orally at the

meeting and/or in writing to the municipal council). Participation at public meetings is important to preserve your right to appeal any decision that is made.
- Write to a council members or municipal staff member to give them your point of view
- Work with the municipal council address your concerns

If you are not satisfied with the municipal council's decision on a question of land use planning in your municipality, it is possible to appeal the decision to the Ontario Municipal Board (OMB).

**The Ontario Municipal Board (OMB)**

The OMB is an independent tribunal established through provincial legislation to provide an independent public forum to hear land-use disputes. The OMB hears appeals on decisions made by provincial approval authorities, including municipal councils, land division committees and the Ministry of Municipal Affairs and Housing. Some of the Board's work falls under *Ontario Municipal Board Act*, the *Planning Act*, the *Municipal Act*, and the *Aggregate Resources Act.* Some of the issues that the OMB deals with include appeals of official plans, zoning by-laws, and minor variances from local by-laws.

The OMB's hearings are generally open to the public to attend. However, to take part in an OMB hearing, you must be a party or a participant.

A party in a case includes an individual or corporation set out in the legislation to be parties to a matter (for example, in a case where a zoning by-law is being appealed, the parties may be the municipality, the applicant for the rezoning, and any persons who filed an appeal to the Board against the zoning by-law). In some instances, to be considered a 'party' one must have made oral submissions at a public meeting, or written submissions to the municipal council.

A participant is a person, group or corporation that may choose to attend only part of the proceedings but makes a statement to the Board on all or some of the issues in the hearing. One does not need to have submitted comments (oral or written) to be added as a participant.

In order to successfully counter a municipal planning decision at the OMB, it is often necessary to provide expert evidence, usually by way of a planner, to demonstrate the decision in question is one of bad planning.

**Appealing OMB Decisions**
It may be possible to appeal an OMB Decision if you think that the OMB decision made an error in law. To do so, you must, within 15 days of the decision, ask Divisional Court if you can appeal. Some decisions of the Board are not subject to review or appeal. It is best to contact the OMB to determine whether an appeal is possible.

**The Citizen Liaison Office**
The Citizen Liaison Office assists the public with the Ontario Municipal Board's processes. The Citizen Liaison is neutral and is unable to attend any hearing events nor speak on anyone's behalf. The Citizen Liaison Office is located at 655 Bay Street on the 15th floor in Toronto.

For more information about permits and approvals, contact your local municipality's Planning Department, and for more information on the OMB see:
http://www.omb.gov.on.ca/english/home.html

# CHAPTER 16: FREEDOM OF INFORMATION

In some circumstances, you may wish to become engaged in environmental decisions in your community but may not have access to the information you need to fully respond to an issue. In these cases, you can make use of access to information legislation in order to access this information.

**How can I access information held by the province of Ontario?**

You may find yourself in a situation where a municipal, provincial, or federal agency or department, or ministry has information that you wish to access. In this circumstance, there are a number of steps you can take to try to access this information.

First, you should always contact the appropriate government department first and simply ask the contact person to provide you with the information. You can also contact the Freedom of Information and Protection Privacy Act Coordinator for the relevant department and ask if the information is available without a formal request. While government offices do not always oblige, it's an easy first step that can sometimes save you a great deal of time.

If this approach is unsuccessful, you may wish to submit a Freedom of Information request to the appropriate government office.

For **municipal** access requests, the governing statute is the *Municipal Freedom of Information and Protection of Privacy Act* and can be found at http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90m56_e.htm

For **provincial** access requests, the governing statute is the *Freedom of Information and Protection of Privacy Act*. A copy of the Act can be found online at: http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90f31_e.htm.

A guide outlining the procedure for making an FOI request to a municipal or provincial entity can be found at http://www.ipc.on.ca/english/Access-to-Information/Accessing-Public-Information/.

If you require information held by the Ministry of Environment, often the case when engaging in environmental decisions, your FOI request should be directed to the following address:

> Ministry of Environment
> Freedom of Information and Privacy Coordinator
> 12th Flr., 40 St Clair Ave W Toronto, ON M4V 1M2

In order to determine to whom you should address your request, you can contact the relevant ministry and request the name of the FOI and Privacy Coordinator.

For **federal** freedom of information requests, the governing statute is the *Access to Information Act.* A copy of the Act can be found online at: http://lois-laws.justice.gc.ca/eng/acts/A-1/index.html

**Preparation of an FOI Request**

Your FOI request must be made by using either the published form or by writing a letter. If you decide to write a letter, it should contain the following information:

1) Letter addressed to the FOI Information Coordinator of the respective department most likely in possession of the information you wish to obtain.

2) The date of your request. This should be clearly visible in the top right side of the request.

3) The body of the letter must clearly indicate the information sought, and where the Information Coordinator might find the information if you have any idea about its whereabouts.

4) Your full name, address, and phone number must be provided at the end of the letter so that the Information Coordinator may contact you during the search process. This is also the address that will be used for delivery.

The cost of submitting a request is $5.00 for each FOI request. Please note that for federal and municipal requests, a money order or cheque in the amount of $5.00 should accompany the access request and should be sent to the government office or institution holding the desired information. However, in the case of provincial requests, the $5.00 cheque should be sent to the Minister of Finance (not the government office to which the request for access is being sent). You may also be charged for the time required to locate, copy and ship the requested information. It is a good idea to ask the Information Coordinator about their department's payment process.

It is important when submitting your request that you keep the language as broad as possible without being so broad as to not allow the ministry to locate the information. You do want to keep the request broad in order to gather as much information as possible. However, if your request is too broad or vague, the ministry may report that they cannot find the information or they may charge you a very costly photocopying fee.

**What can I do if my request is denied?**

If your request for information is denied, the department must provide you with notice of that decision in writing. For municipal and provincial requests, you have a right to appeal the decision to the Information and Privacy Commissioner of Ontario. You can find

information about how to make an appeal on the IPC's website: http://www.ipc.on.ca/english/Access-to-Information/Appeals-for-Public/.

For access requests denied by federal offices, you can submit a complaint to the Information Commissioner, an individual with the power of an ombudsman, who will attempt mediation. Failing success at mediation, you may file an appeal to the Federal Court B Trial Division. You can find more information from the federal Department of Justice's website: http://www.justice.gc.ca/atip-aiprp/home-accueil-eng.asp or http://www.infocom.gc.ca/faq/default-e.asp.

# CHAPTER 17: INTRODUCTION TO ENVIRONMENTAL HEALTH LAW AND REGULATION: OPPORTUNITIES FOR ENGAGEMENT (FACT SHEET SERIES)

## The Purpose of the Fact Sheet Series

The Fact Sheet Series: *Environmental Health Law and Regulation: Opportunities for Engagement* focuses on specific opportunities for input and engagement under key environmental health statutes in Canada and Ontario

Choices can be made about where to focus attention; often engaging at one point in the overall regulatory arena highlights areas for input and engagement on a related topic at another level. For example, those interested in advocating for better content labelling of cosmetics and pharmaceuticals may initially explore those issues at a local level and then decide that other opportunities to engage also exist at federal and international levels.

## Division of Powers and Jurisdiction Opportunities

The federal, provincial, municipal and aboriginal governments all have a role to play in the regulation and protection of environmental health. While the jurisdiction of the provincial government includes the establishment of regulations to prevent harm to human and ecosystem health, to prevent discomfort and loss of enjoyment of property, and to prevent damage to the physical environment, the federal government's jurisdiction requires it to undertake research, enter into treaties, control transboundary air pollution and set standards to protect public health and safety. Municipal role involves land use planning and the creation of by-laws, while Aboriginal governments also have powers and responsibilities. Some federal statutes explicitly recognize these powers.

These varying jurisdictions give rise to matching opportunities for engagement and input in environmental health law and regulation. At the local, regional or municipal level, citizens can provide input on matters such as local programming or municipal by-laws. At the provincial level, citizens can provide input as individuals, groups, associations, professionals on specific agenda items such as provincial occupational health law or toxics regulation. At the federal level, the public can provide recommendations for new substances, evaluation of efficacy of existing laws, testing of participation provisions.

An example of the intersection of municipal and international action and law occurred in the *Hudson* pesticide by-law case, where a municipal by-law to control pesticides was

upheld by the Supreme Court of Canada in part because of Canada's international obligations. The Court said that Canada's governments, including municipalities, had responsibilities as trustees of the environment, and were entitled to pursue a precautionary approach endorsed by Canada in various international environmental agreements.

### Multi-scale Environmental Health Issues: Local to Global

Most environmental health and equity concerns have key elements which need attention by each of the jurisdictions. For example, in the case of reducing exposure to toxic substances,

- Municipalities may pass right to know by-laws (ex. Toronto)
- Provinces may pass a Toxic Reduction Act (ex. Ontario)
- Canada may pursue regulation of toxic substances (as under CEPA)
- The international community may control some toxic or hazardous substances under treaties (such as Stockholm or Basel)

Another example of a comprehensive approach to the protection of environmental health is:

- The establishment of international norms (such as the World Health Organization in its definition of the determinants of health)
- Federal programmatic action (such as by Canada under its health spending power and its support of research)
- Provincial regulation of pollution
- Programs by local health units

There are similar examples in other areas of environmental health, including energy poverty, management of garbage and waste, drinking water protection, pesticides control or healthy shelter and consumer products.

### Overview of Statues included in the Fact Sheet Series

- Canada Labour Code
- Canadian Environmental Protection Act
- Hazardous Products Act
- Consumer Safety Products Act
- Pest Control Products Act
- Food and Drug Act
- Ontario Occupational Health and Safety Act
- Ontario Toxic Reduction Act
- Ontario Environmental Protection Act and Ontario Water Resources Act
- Ontario Municipal Act
- Ontario Clean Water Act
- Ontario Safe Drinking Water Act
- Health Protection and Promotion Act (Ontario)
- Nutrient Management Act (Ontario)

Successful implementation of environmental health regulation requires:

- Responsibility by a diversity of players is key to both the vision and the practical implementation of a strong and resilient approach to environmental health protection.
- Complex implementation of environmental health law and policy is enabled when it is established within a clear framework with well articulated methodologies
- Strong enforceability and new legal tools for implementation and enforcement in certain cases are also necessary to its success.

We can take a lesson for environmental health regulation from the lessons learned for drinking water protection in the Walkerton Inquiry, which:

- Provided a safety net of clear standards, roles, oversight, multiple barriers and strong public engagement was the recommended approach in that Inquiry, together with continuous improvement
- At same time, pursuing the safest system must never be put on hold on the basis of an alleged lack of "perfect" information

## Concluding Notes

There is an extensive array of statutes, jurisdictions and bodies with responsibility for environmental health. There are many opportunities to use existing tools and powers for greater public and environmental health protection. It is important to be familiar with the roles, responsibilities, and tools that you might want to use. There are many opportunities to improve the legislative framework and its application in practice, as well as opportunities to be informed and participated in local practices and decisions.

## For more information

**Please contact us:**

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CELA web site: www.cela.ca

Environmental Health Institute of Canada
Suite 205, 35 the Links Road, Willowdale
Toronto ON M2P 1T7
Fax: 416-364-4074 or 905-845-3794
Email:info@ehiccanada.ca
http://ehicanada.com/index.htm

**Other source of information;**

- Low Income Energy Network: www.lowincomeenergy.ca
- CPCHE website: www.healthyenvironmentforkids.ca
- PollutionWatch Website: www.PollutionWatch.org
- Water Guardians website: www.thewaterhole.ca
- Environment & Law Resource Library: www.ecolawinfo.org
- For additional resources and contacts see our online list of Making the Links resources: http://www.cela.ca/collections/justice/making-links-environmental-health-equity-and-law

## CHAPTER 18:

# Canadian Environmental Protection Act

(S.C. 1999, c.33) http://laws-lois.justice.gc.ca/eng/acts/C-15.31/index.html

### Highlights of the Act

- Human health is to be protected from the risk of adverse effects of toxic substances, pollution, waste, use of biotechnology
- Long term human health benefits are to be considered in decisions
- Government is required to act expeditiously to assess whether existing or new substances are toxic or capable of becoming toxic, and assess the risk they pose to the environment and human life and health
- An Environmental Registry is established, which gives Canadians the opportunity to learn about how the federal government administers the *Act* and invites the public to participate in the public consultations and decision-making processes that take place under the Act.
- Whistle blower protection for employees is prescribed
- The Minister of Health and the Minister of the Environment are required to conduct research relating to hormone disrupting substances including re detection, effects, preventive, control and abatement
- The Minister of Health is required to conduct research regarding role of substances in illnesses or in health problems & distribute it to the public

### Opportunities for Engagement

- Review registry notices at http://www.ec.gc.ca/lcpe-cepa/eng/search/
- Review research conducted under the Act: http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=163364B7-1
- Suggest research needed to Environment Canada and Health Canada
- Follow and comment on developing guidelines: http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=E9DBBC31-1
- Provide input into standards and risk management such as the Chemicals Management Plan
- Call for extension of regulations
- Monitor the Canada Gazette and submit comments on proposed regulations: http://www.gazette.gc.ca/index-eng.html
- Use the National Pollutant Release Inventory (NPRI) to access information on pollution emissions: http://www.ec.gc.ca/inrp-npri/default.asp?lang=En&n=4A577BB9-1
- Try to get onto relevant advisory committees
- Suggest additions to schedules under the Act, or bring new information to the attention of Minister

- Use the federal petition process to get answers from federal ministers on specific environmental and sustainable development issues that involve federal jurisdiction http://www.oag-bvg.gc.ca/internet/English/pet_fs_e_919.html
- Advocate for new fuel and emissions standards
- Review and respond to notices (posted to the CEPA Registry) regarding potential declarations of toxicity
- Review and respond to draft chemical management plans: www.ec.gc.ca/lcpe-cepa/eng/search/For more information on the Chemical Management Plan: www.chemicalsubstanceschimiques.gc.ca/plan/index_e.html
- Advocate for the addition of substances to Export Control List (if controlled under international agreements)
- Provide suggestions for needed new controls or regulations pertaining to animate substances
- File Notices of Objection requesting a Board of Review if Ministers decide not to include substance on list of toxic substances
- Advocate for more stringent international controls on air and water pollution
- Participate in reviews, such as the National Energy Board
- Call for more responsibility on the part of emitters

# CHAPTER 19:

# Canada Labour Code

(R.S.C., 1985, c. L-2) < http://laws-lois.justice.gc.ca/eng/acts/L-2/>

## Highlights of the Act

- Purpose of part II of the *Canada Labour Code* (http://laws-lois.justice.gc.ca/eng/acts/L-2/) is to prevent accidents and injury to health arising out of, linked with, or occurring during course of employment
- Every employer has a general duty to ensure that the health and safety at work of every employee is protected
- Priority is specified to first eliminate hazards, then reduce hazards, then provide personal protective clothing, equipment and materials to employees
- Every employer has duty to ensure that concentrations of hazardous substances in the workplace are controlled in accordance with prescribed standards (that is, the relevant regulations)
- Every employer has a duty to ensure that hazardous materials are stored, handled and labelled as per regulations
- Material data safety sheets regarding controlled substances, ingredients on Ingredients Disclosure List, chemical identity of any substances that employer believes may be harmful should be made available

## Opportunities for Engagement

- Review Material Safety Data Sheets (MSDS) at your own workplace and ensure their currency
- Ensure practices at the individual workplace are consistent with the MSDS and other recommended practices
- Provide feedback to employers or the party responsible for the MSDS (manufacturer or importer) if the information is incomplete
- Monitor standard setting process and provide input into the Canada Labour Code regulations – subscribe to the Liason bulletins for up to date information (NC-Liaison-Bulletin-Liaison-GD@hrsdc-rhdsc.gc.ca)

# CHAPTER 20:
# Sector Specific Regulations

## Highlights

Various sector specific regulations provide the public with useful information, and the opportunity to become engaged in environmental decision-making. The following is a list of opportunities or regulations under which the public are offered participatory rights.

- Reports on sulphur content and fuel additives (http://www.ec.gc.ca/energie-energy/default.asp?lang=En&n=3A2A9F94-1)
- Phosphorus concentration for laundry detergents (http://laws-lois.justice.gc.ca/eng/regulations/SOR-89-501/index.html)
- Mobile PCB treatment and destruction (http://laws-lois.justice.gc.ca/eng/regulations/SOR-90-5/index.html)
- Chlor-Alkali Mercury release regulations (plastics for example) (http://laws-lois.justice.gc.ca/eng/regulations/SOR-90-130/index.html)
- Lead in gasoline (http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=54FE5535-1&wsdoc=8E3C2E9B-38A8-461A-8EC3-C3AA3B1FD585)
- Asbestos Mines and Mills - release of asbestos fibres to ambient air (http://laws.justice.gc.ca/eng/regulations/SOR-90-341/page-1.html)
- Chlorobiphenyls Regulations (PCBs) (http://laws-lois.justice.gc.ca/eng/regulations/SOR-91-152/index.html)
- Secondary Lead Smelter release regulations (http://laws-lois.justice.gc.ca/eng/regulations/SOR-91-155/index.html)
- Pulp and Paper Mill Effluent – chlorinated dioxins and furans regulations (http://www.ec.gc.ca/lcpe-cepa/eng/regulations/detailReg.cfm?intReg=21)
- Vinyl Chloride Release Regulations (http://laws-lois.justice.gc.ca/eng/regulations/SOR-92-631/index.html)
- Benzene in Gasoline regulations (http://laws-lois.justice.gc.ca/eng/regulations/SOR-97-493/)
- Ozone-depleting substances regulations –( http://laws-lois.justice.gc.ca/eng/regulations/SOR-99-7/index.html)
- Sulphur in gasoline regulations (http://laws-lois.justice.gc.ca/eng/regulations/SOR-99-236/index.html)
- Storage tanks for petroleum products (http://www.ec.gc.ca/rs-st/)
- On-Road Vehicle and Engine Emissions and Off-road engine emission regulations (http://www.canlii.org/en/ca/laws/regu/sor-2003-2/latest/sor-2003-2.html)
- Dry-Cleaning – Tetrachloroethylene use and reporting (http://laws-lois.justice.gc.ca/eng/regulations/SOR-2003-79/page-1.html)
- Solvent Degreasing – reducing use of trichloroethylene and tetrachloroethylene ()http://www.ec.gc.ca/rsd-sdr/default.asp?lang=En&n=79569749-1)

- Federal Halocarbon Regulations – (refrigeration and air-conditioning) (http://www.ec.gc.ca/ozone/default.asp?lang=En&n=E06A6B0D-1)

### Opportunities for Engagement

- For any of the Sector specific regulations, ask for monitoring, annual reports, compliance reports
- How is the regulation working – ask for departmental analyses conducted, or engage in such an analysis
- Is it accomplishing what it was meant to do; are there resources for inspection and compliance
- Suggest these questions to federal commissioner for sustainable development

## CHAPER 21:

# Canadian Consumer Products Safety Act

(S.C. 2010, c.21) < http://laws-lois.justice.gc.ca/eng/acts/C-1.68/index.html>

### Highlights of the Act

- Addresses consumer products specifically, defining *consumer products* as likely to be obtained by an individual for non-commercial purposes. Applies to consumer products, both manufactured within Canada and imported. Note that certain consumer products, such as motor vehicles, food, and drugs, as these are regulated by other Canadian laws.
- Provides a new definition of "danger to human health or safety", including 4 key elements: (i) *unreasonable* hazard; (ii) existing or potential; (iii) as a result of its *normal or foreseeable* use and (iv) reasonably expected to have an acute or chronic adverse effect on health, either immediately or longer term, and includes death. For more information: http://www.hc-sc.gc.ca/cps-spc/pubs/indust/ccpsa_ref-lcspc/index-eng.php
- Key elements of the Act include:
    - Requires the **reporting of incidents** - the "early warning" provision requires industry to provide information to Health Canada and to the product's supplier (if applicable) concerning consumer product safety incidents or product defects that result, or could reasonably be expected to result, in death or harmful health effects.
    - **Requires the maintenance of certain documents** so that unsafe products can be traced back to their source.
    - Health Canada can require manufacturers or importers to provide or obtain **product safety information** - including studies or tests - that indicate whether a consumer product meets the requirements of the CCPSA.
    - **New general prohibitions** related to the manufacture, importation, sale or advertisement of consumer products that could pose an unreasonable danger to the health or safety of Canadians.
    - Prohibitions related to the **packaging, labelling** or advertisement of a consumer product in a manner that is false, misleading or deceptive in respect of its safety.
- For information on the Act see: http://www.hc-sc.gc.ca/cps-spc/legislation/acts-lois/ccpsa-lcspc/index-eng.php and for information on Consumer Product Safety, including product fact sheets and advisories and recalls, see: http://www.hc-sc.gc.ca/cps-spc/index-eng.php

### Opportunities for Engagement

The public can access information from Health Canada on products controlled, and recalled items: http://www.hc-sc.gc.ca/cps-spc/legislation/acts-lois/ccpsa-lcspc/index-eng.php

## CHAPTER 22:

# Ontario Occupational Health and Safety Act

(R.S.O. 1990, c. 0.1) < http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90o01_e.htm>

### Highlights of the Act

- Part IV deals with Toxic Substances and requires that the Director prohibit, limit, restrict or apply other controls to toxic substances (biological, chemical or physical) used in a workplace, where the substance is "likely to endanger the health of a worker"
- Employers must ensure all hazardous materials in the workplace are listed and that current material safety data sheets are supplied (they must be updated at least every 3 years)
- At the request of any person the Medical Officer of Health *shall* request a copy of a material safety data sheet and make it available to the person (and may not disclose the name of the person who requested it)
- Regulations may require employers to assess all agents in the workplace to determine if there are hazardous materials
- If employer is advised a worker has an occupational illness, must advise Director, trade union and health and safety committee
- Act has 34 regulations dealing with array of specific contexts, including:
    - control of exposure to biological or chemical agents;
    - specific regulations for certain designated substances such as arsenic, asbestos, vinyl chloride and others;
    - Regulations for farming, health care, teachers,
    - eg 860 regarding the WHMIS, Workplace Hazardous Materials Information System

### Opportunities for Engagement

- Toxic substances orders are to be posted; and must identify the agents of concern and the reasons
- Employer, worker or trade union may appeal to the Minister

The public can:

- Access material safety data sheets
- Provide input regarding the workplace exposure limits to toxic substances
- Offer suggestions of new substances to assess
- Provide suggestions or requests for reviews of existing standards
- Suggest the review of existing practices and protective methods
- Suggest the review of potential for interaction with other substances

## CHAPTER 23:

# Food and Drugs Act

(R.S.C., 1985, c. F-27) < http://laws-lois.justice.gc.ca/eng/acts/F-27/>

### Highlights of the Act

- Defines "cosmetic" – for complexion, hair, skin, teeth, including deodorants and perfumes
- Defines "drug" – referring to disease and disinfection among other things
- Defines "food" – includes food or drink for human beings, includes chewing gum and anything that may be mixed with food whatsoever
- Prohibits labelling or advertising *food* as treatment for list of conditions in Schedule A (long list from alcoholism to diabetes to thyroid conditions)
- Regulations permit sale of *drugs* as preventive for those conditions so long as not labelled as treatment or cure
- General prohibition on selling food that is adulterated, contaminated, unfit, prepared under unsanitary conditions
- Standards for food may be prescribed and there is a prohibition on importing or inter-provincial conveyance unless consistent with the standard
- Food may not be sold if subject to a list of drugs any of which were administered to the animals (including meat, eggs, milk)
    - For example, clenbutarol (a steroid) or chloramphenicol (an antibiotic)
- Extensive provisions regarding nutrition content, claims and labelling (eg "protein"; "meat extenders"; "kosher"; energy content; and other matters; nutrient claims; form of labelling; quantities; packaging
- Division 16 of the regulations deals with food additives including Ministers' approval, maximum residue limits if applicable, labelling
- General prohibition on sale of any cosmetic that may injure health
- Standards may be prescribed; labels and packages that may be mistaken for the standard are prohibited unless in compliance with those standards
- Information available via Health Canada Food Directorate: http://www.hc-sc.gc.ca/ahc-asc/branch-dirgen/hpfb-dgpsa/fd-da/index-eng.php

### Opportunities for Engagement

- Call for additional labelling
- Seek credible lists of substances of concern
- Provide input to the regulation making process. For example, whether a particular ingredient should not be allowed to be used in cosmetics
- The register contains information about products, applications, registrations, re-evaluations and special reviews, including active ingredients and uses allowed or sought; decision on applications, conditions, information that was provided in support of applications, information considered by the Minister, reports on evaluation of health and environment risks and value and other matters

## CHAPTER 24:

# Pest Control Products Act

(S.C. 2002, c. 28) < http://laws.justice.gc.ca/eng/acts/P-9.01/>

## Highlights of the Act

- This legislation allows the Minister to register a pesticide in Canada if it is shown to have "acceptable value";
    - "value" is defined with reference to efficacy (in controlling pests); effect on host organisms; and health, safety and environmental benefits, and social and economic impact
- Minister has an obligation to minimize health and environmental risks and to encourage lower risk products and other measures
- If a registration is granted, it is made conditional on the "label" which outlines the allowed uses and certain conditions of use such as protective wear and frequency of use, concentration limits allowed and other matters.
- Applicant to register a pesticide has the burden of proof: to prove that the health and environmental risks of the product are acceptable
- Minister is to apply a science based approach
- For pesticide registration decisions, or re-evaluations, the Minister must consider aggregate exposure, including dietary, drinking water, use in and around homes and schools, and cumulative effects of pesticides with a common mechanism of toxicity

## Opportunities for Engagement

- Review some of these pesticide assessments
- Take advantage of the reading room
- Audit some of the assumptions and inputs
- Seek information about adverse effects reports
- Make suggestions for special reviews
- Any person may ask for reconsideration of registration decisions; export decisions; or cancellation of export permits
- Pest Control Products Register: http://www.hc-sc.gc.ca/cps-spc/pest/part/protect-proteger/publi-regist/index-eng.php
    - The register contains information about products, applications, registrations, re-evaluations and special reviews
    - Including active ingredients and uses allowed or sought;
    - decision on applications, conditions
    - Information that was provided in support of applications, information considered by the Minister, reports on evaluation of health and environment risks and value and other matters

## CHAPTER 25:

# Toxics Reduction Act

(S.O. 2009, c. 19) < http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_09t19_e.htm>

## Highlights of the Act

- Legislation passed in Ontario 2009
- Intent is to reduce use of toxics in air, land, water and consumer products
- Facilities will be required to track specified toxic substances they use
- Facilities must develop plans to reduce use of those toxics, and make summaries of the plans public
- At least every five years the minister must consult and consider adding to the list of toxic substances

## Opportunities for Engagement

- Get involved in preparation of employers toxic reduction auditing and preparation of plans
- Review plans as they are developed in your vicinity
- Review reductions achieved as reported in later years
- Suggest additional substances to be added to the regulations under the Act
- Ask the Ministry of the Environment (MOE) for reports of results of the Bill
- Follow the implementation of Ontario's toxic use reduction strategy at http://www.ene.gov.on.ca/environment/en/category/toxic_substances/index.htm

# CHAPTER 26:

# Ontario Environmental Protection Act

(R.S.O. 1990, c. E.19) < http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90e19_e.htm>

## Highlights of the Act

- The purpose of the Environmental Protection Act (EPA) is "to provide for the protection and conservation of the natural environment."
- The EPA is Ontario's key legislation for environmental protection.
- The EPA grants the Ministry of the Environment (MOE) broad powers to deal with the discharge of contaminants, and specifically:
  - prohibits the discharge of any contaminants into the environment which cause or are likely to cause negative effects
  - in the case of some approved contaminants requires that they must not exceed approved and regulated limits
  - requires that any spills of pollutants be reported and cleaned up in a timely fashion
  - deals with transactions involving contaminated land.
  - For more information see the MOE website: http://www.ene.gov.on.ca/environment/en/legislation/environmental_protection_act/index.htm

## Opportunities for Engagement

- Ask the Ministry of the Environment (MOE) for sector based compliance info
- Ask MOE for emissions information in a community or from general monitoring
- Ask MOE for data on whether the regulations are reducing pollution or conduct a study on such a question
- Note: With Bill 68, the *Open for Business Act, 2010,* changes have been made to the approvals process under the EPA. As a result, certain activities and sectors, (designated through regulation), are no longer required to formally apply and obtain a "Environmental Compliance Approval" (formerly "Certificate of Approval" or "C of A") from the Ministry of Environment (MOE). Certain activities will be able to register their activity on an online registry, the Environmental Activity and Sector Registry (EASR). [xliv] Activities that do not qualify for registration will require an ECA, which are subject to the EBR notice and comment provisions. [xlv] Additional information as well as the EASR can be accessed via the MOE website: http://www.ene.gov.on.ca/environment/en/industry/assessment_and_approvals/environmental_approvals/index.htm
- For access to information on approvals, the public can:
  - Access the EBR Registry online for notices of applications for permits to take water, and submit comments. For more information see chapter 12, or the website of the Environmental Commissioner of Ontario (ECO): www.eco.on.ca/index.php/en_US/environmental-bill-of-rights/about-the-ebr

- Access the Environmental Activity and Sector Registry (EASR)online: https://www.appmybizaccount.gov.on.ca/wps/portal/mba_pub/!ut/p/c4/FcsxDoAwCAXQG_Xvbp5C60ZNg6QUiFbPr-bNDxs-Ro8wDXEjxYocxFXF2uRXSeHnIE1xF5U9Hd4rlj8pGSNXQ_Q-v3Ed41k!/

# CHAPTER 27:

# Ontario Water Resources Act

(R.S.O. 1990, c. O.40) < www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90o40_e.htm>

## Highlights of the Act

- The purpose of the Ontario Water Resources Act (OWRA) is "to provide for the conservation, protection and management of Ontario's waters and for their efficient and sustainable use, in order to promote Ontario's long-term environmental, social and economic well-being".
- The OWRA focuses on both groundwater and surface water
- It regulates sewage disposal and "sewage works" and prohibits the discharge of polluting materials that may impair water quality.
- It regulates the issuance of permits to take water (PTTW), as well as well construction, operation and abandonment, and the approval construction and operation of all waterworks.
- For more information see the website of the Ministry of the Environment (MOE): http://www.ene.gov.on.ca/environment/en/legislation/ontario_water_resources_act/index.htm

## Opportunities for Engagement

- Ask the Ministry of the Environment (MOE) for sector based compliance information
- Ask MOE for emissions information in a community or from general monitoring
- Ask MOE for data on whether the regulations are reducing pollution or conduct a study on such a question
- Note: With Bill 68, the *Open for Business Act, 2010,* changes have been made to the approvals process under the OWRA. As a result, certain activities and sectors, (designated through regulation), are no longer required to formally apply and obtain a "Environmental Compliance Approval" (formerly "Certificate of Approval" or "C of A") from the Ministry of Environment (MOE). Certain activities will be able to register their activity on an online registry, the Environmental Activity and Sector Registry (EASR). [xlvi] Activities that do not qualify for registration will require an ECA, which are subject to the EBR notice and comment provisions. [xlvii] Additional information as well as the EASR can be accessed via the MOE website: http://www.ene.gov.on.ca/environment/en/industry/assessment_and_approvals/environmental_approvals/index.htm
- For access to information on approvals, the public can:
    - Access the EBR Registry online for notices of applications and submit comments. For more information see chapter 12, or the website of the Environmental Commissioner of Ontario (ECO): www.eco.on.ca/index.php/en_US/environmental-bill-of-rights/about-the-ebr

- Access the Environmental Activity and Sector Registry (EASR)online: https://www.appmybizaccount.gov.on.ca/wps/portal/mba_pub/!ut/p/c4/FcsxDoAwCAXQG_Xvbp5C60ZNg6QUiFbPr-bNDxs-Ro8wDXEjxYocxFXF2uRXSeHnIE1xF5U9Hd4rlj8pGSNXQ_Q-v3Ed41k!/

**CHAPTER 28:**

# Municipal Act, 2001

(S.O. 2001, c. 25) < http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_01m25_e.htm>

## Highlights of the Act

- The Municipal Act provides municipalities with powers and duties for the purpose of providing good government with respect to matters within their jurisdiction
- Municipalities have extensive powers regarding health, safety and nuisance, and regarding the natural environment
- They have broad authority to govern their affairs as they deem appropriate
- Municipalities may regulate for the health, safety and well being of the inhabitants of the municipality in matters not specifically provided in the Municipal Act
- For more information about the Municipal Act see the website of the Ministry of Municipal Affairs and Housing (MMAH): http://www.mah.gov.on.ca/Page184.aspx

## Opportunities for Engagement

- At local level, the public can find out if any actions or by-laws have been taken under Municipal Act powers, such as Toronto's recent Right to Know By-law
- Suggest such actions. Examples include: right to know by-laws, mercury thermometer take back programs; more stringent sewer use by-laws; lead pipe replacement programs

**CHAPTER 29:**

# Clean Water Act, 2006

(S.O. 2006, c. 22) < http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_06c22_e.htm>

## Highlights of the Act

- Clean Water Act (CWA) was passed in 2006 to protect sources of drinking water
- Source Protection
    - CWA requires that local communities - through local Source Protection Committees - assess existing and potential threats to their water, and that they set out and implement the actions needed to reduce or eliminate these threats
    - CWA requires public participation on local source protection plans
    - Source protection planning areas are established on a watershed basis and source protection planning committees must oversee the assessment of threats and risks to sources of drinking water
    - Threats that are significant require mandatory implementation of source protection plans which are to be approved by the Minister
    - Matters provided in the plans will supersede other legislation such as land use planning rules
- CWA introduced the Ontario Drinking Water Stewardship Program which offers financial assistance to farmers, landowners, and small or medium businesses for activities that reduce threats to local drinking water sources.

## Opportunities for Engagement

- Follow meetings of local drinking water source protection committee. You can find information about drinking water source protection online: http://www.sourcewaterinfo.on.ca/
- Ask to be on mailing lists
- Give input re threats assessment report
- Give input re source protection plan once proposed
- Support stringent measures for significant threats to drinking water sources

# CHAPTER 30:

# Safe Drinking Water Act, 2002

(S.O. 2002, c. 32) < http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_02s32_e.htm>

## Highlights of the Act

- The Safe Drinking Water Act (SDWA) was passed in 2002
- The SDWA is one of four legislative changes recommended in the Report of the Walkerton Commission of Inquiry.
- The purpose of the SDWA is to protect human health through the control and regulation of drinking-water systems and drinking-water testing.
- The Act requires that all municipal drinking water systems obtain an approval from the Director of the MOE in order to operate, provides legally binding standards for testing of drinking water and requires that testing be done in licensed and accredited laboratories.
- The SDWA consolidates legislative and regulatory requirements regarding the treatment and distribution of drinking water in Ontario, main features of the Act including:
    - drinking-water quality standards,
    - licensing for water-testing laboratories,
    - approvals process for private water supply systems,
    - duties on owners, operating authorities and laboratories to immediately report adverse water test,
    - enforcement mechanisms, and
    - an annual drinking-water report published by the Minister.
- The SDWA gives the public the right to detailed information about the quality of their drinking water. The SDWA also ensures that water suppliers make reports available to the public at their facilities.
- Adverse test results from treated water testing must be reported to system owner / operator, Ministry of Environment and medical officer of health and addressed
- Testing and reporting must be made public
- Advisory Council on Drinking-water Quality and Testing Standards is established, which considers issues and provides recommendations relating to standards for drinking-water quality and testing.

## Opportunities for Engagement

- Access information provided under the Act, such as: records of operational checks (sampling data); test results with respect to testing for microbiological and chemical parameters; any approval and order that applies to the system and is still in effect, if the approval or order was issued after January 1, 2001; every annual report; and a copy of the Regulation.
- Access the EBR Registry online for notices of proposed drinking water regulations, and submit comments on the strengths and weaknesses of the regulations and to suggest improvements. For more information see chapter 12 or the website of the Environmental Commissioner of Ontario (ECO): www.eco.on.ca/index.php/en_US/environmental-bill-of-rights/about-the-ebr.

- Bring the need for the establishment or improvement of specific water quality standards to the attention of the Advisory Council on Drinking-Water Quality and Testing Standards. For more information on the Ontario Drinking Water Advisory Council (ODWAC), see: www.odwac.gov.on.ca/.

**CHAPTER 31:**

# Health Protection and Promotion Act, 2010

(R.S.O. 1990, c. H. 7) http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90h07_e.htm

## Highlights of the Act

- The purpose of Ontario's Health Protection and Promotion Act (HPPA) is "to provide for the organization and delivery of public health programs and services, the prevention of the spread of disease and the promotion and protection of the health of the people of Ontario"
- Responsibilities for health protection are largely at the municipal level, although there are provincial medical officers of health whose task is to oversee coordination for outbreaks that affect wider areas.
- Mandatory public health programs include community sanitation, safe drinking water, and prevention of communicable disease, among others
- Other mandatory programs include disease prevention, including cardiovascular, cancer and others, and health services to infants, pregnant women in high risk categories and others
- Complaints of health hazard in occupational or environmental health are investigated in conjunction with the relevant ministry
- Medical Officers of Health have a positive statutory duty to keep themselves informed with respect to occupational and environmental health
- Various ministries have obligations to supply information to the Medical Officer of Health
- The Act includes responsibility for Small Drinking Water Systems
- Extensive order powers are provided under the Act, such as vacating premises, removing materials
- Food premises inspection powers are provided
- Communicable diseases responsibilities are set out
- HPPA provides the Medical Officer of Health responsibility to determine potability of community's water
- Issuance of Boil Water Advisories or Drinking Water Advisories is by the Medical Officer of Health (pursuant to protocols developed by the Ministry of Health and Long Term Care)

## Opportunities for Engagement

- Ask health unit about the small water systems inspection program
- Look at Drinking Water Advisories and Boil Water Advisories – are there any trends
- Ask questions of local medical officer of health
- Suggest environmental health issues be included in programming

**CHAPTER 32:**

# Nutrient Management Act, 2002

(S.O. 2002, c. 4) <http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_02n04_e.htm>

## Highlights of the Act

- The Nutrient Management Act (NMA) was passed in 2002
- A primary aim is to keep pathogens from surface or ground-water supplies
- Establishes rules regarding separation distances from wells, and the application of "nutrients" such as animal manure, runoff, municipal sewage biosolids to land, and pulp and paper mill biosolids, food processing residuals.
- The Act and its regulations are administered by the Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) and the Ministry of the Environment (MOE). The MOE and OMAFRA share responsibility for policy and standards development. Outreach, training, certification and approvals are the responsibility of OMAFRA and compliance and enforcement the responsibility of the MOE.

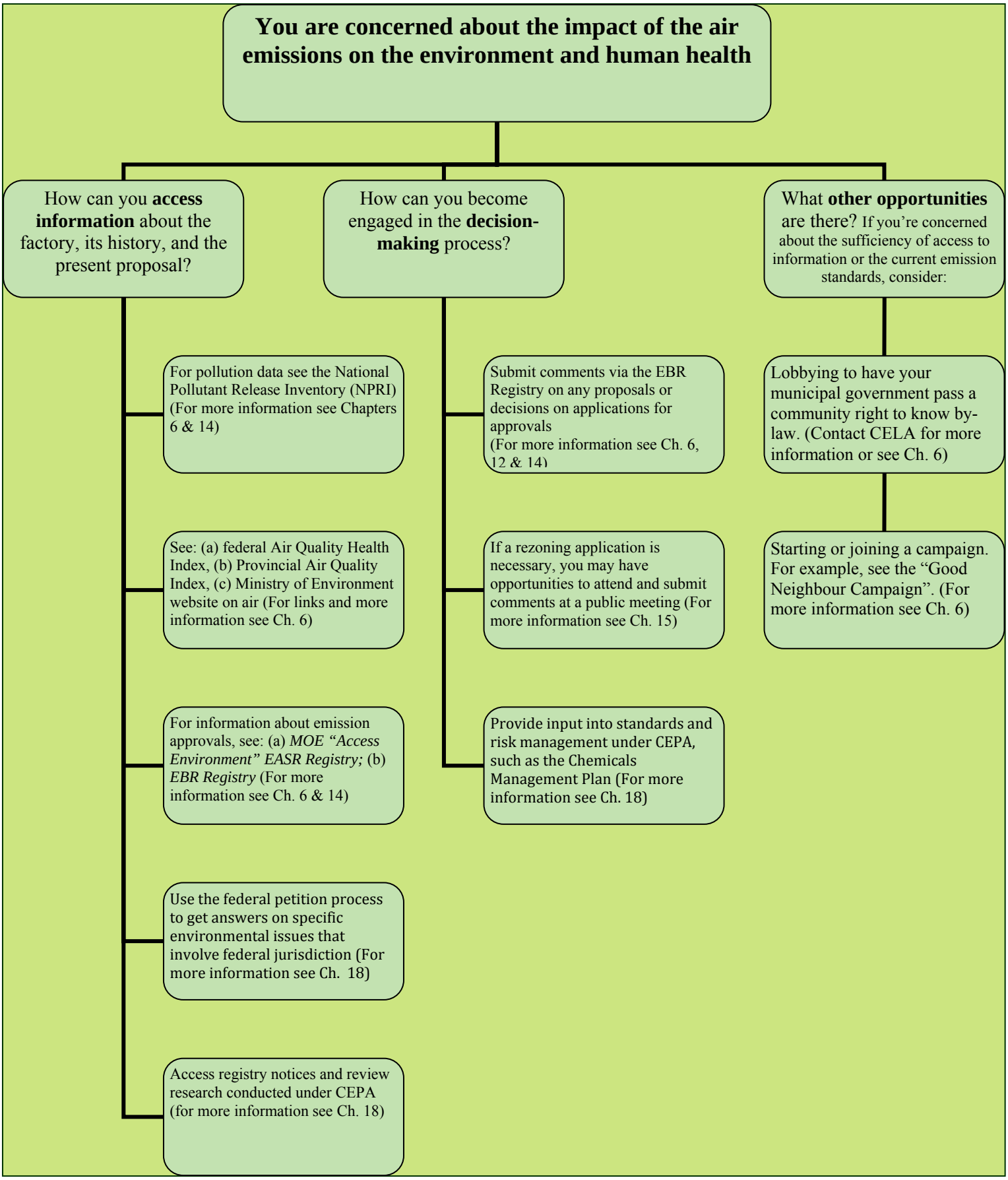
## Opportunities for Engagement

- Ask the MOE, OMAFRA for nutrient management plans
- Find out what your municipality is doing with sewage biosolids
- Ask for reviews, compliance reports
- Ask for monitoring of outcomes
- In areas experiencing adverse effects, ask for special studies with follow up regarding sources (e.g. Lake Huron beaches)
- Advocate for additional measures such as new best management practices
- More information available online: http://www.omafra.gov.on.ca/english/agops/index.html

## CHAPTER 33: CASE STUDY – INDUSTRIAL AIR EMISSIONS

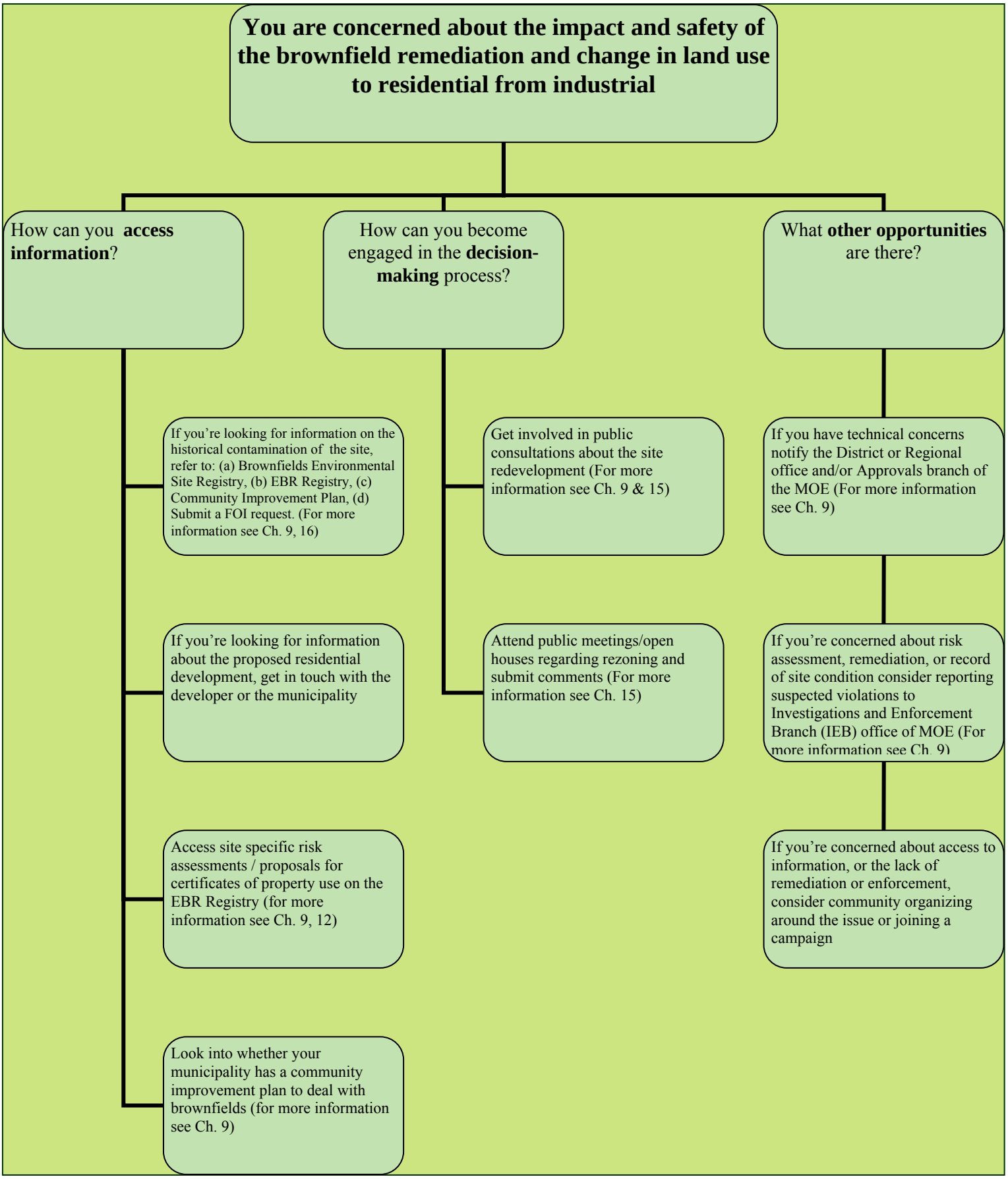
A local company that owns Factory XYZ in your community plans to enlarge and expand the factory's operations. It is anticipated that this will result in increased air emissions.

How can you, or your clients, access information about the factory, its history, and the present proposal? How can you, or your clients, become engaged in the decision-making process? What other opportunities for engagement are there? See flow chart on next page for a summary of some of the opportunities for public engagement that exist.


You are concerned about the impact of the air emissions on the environment and human health
How can you **access information** about the factory, its history, and the present proposal?
How can you become engaged in the **decision-making** process?
What **other opportunities** are there? If you're concerned about the sufficiency of access to information or the current emission standards, consider:
For pollution data see the National Pollutant Release Inventory (NPRI) (For more information see Chapters 6 & 14)
See: (a) federal Air Quality Health Index, (b) Provincial Air Quality Index, (c) Ministry of Environment website on air (For links and more information see Ch. 6)
For information about emission approvals, see: (a) *MOE "Access Environment" EASR Registry;* (b) *EBR Registry* (For more information see Ch. 6 & 14)
Use the federal petition process to get answers on specific environmental issues that involve federal jurisdiction (For more information see Ch. 18)
Access registry notices and review research conducted under CEPA (for more information see Ch. 18)
Submit comments via the EBR Registry on any proposals or decisions on applications for approvals (For more information see Ch. 6, 12 & 14)
If a rezoning application is necessary, you may have opportunities to attend and submit comments at a public meeting (For more information see Ch. 15)
Provide input into standards and risk management under CEPA, such as the Chemicals Management Plan (For more information see Ch. 18)
Lobbying to have your municipal government pass a community right to know by-law. (Contact CELA for more information or see Ch. 6)
Starting or joining a campaign. For example, see the "Good Neighbour Campaign". (For more information see Ch. 6)

# CHAPTER 34: CASE STUDY - BROWNFIELDS

You have heard that the contaminated Site XYZ has been purchased by Company ABC for the development of a residential complex. How do you, or your clients, access information about the proposed residential development, or engaged in the decision-making process? See flow chart on next page for a summary of some of the opportunities for public engagement that exist.


You are concerned about the impact and safety of the brownfield remediation and change in land use to residential from industrial
How can you access information?
How can you become engaged in the decision-making process?
What other opportunities are there?
If you're looking for information on the historical contamination of the site, refer to: (a) Brownfields Environmental Site Registry, (b) EBR Registry, (c) Community Improvement Plan, (d) Submit a FOI request. (For more information see Ch. 9, 16)
If you're looking for information about the proposed residential development, get in touch with the developer or the municipality
Access site specific risk assessments / proposals for certificates of property use on the EBR Registry (for more information see Ch. 9, 12)
Look into whether your municipality has a community improvement plan to deal with brownfields (for more information see Ch. 9)
Get involved in public consultations about the site redevelopment (For more information see Ch. 9 & 15)
Attend public meetings/open houses regarding rezoning and submit comments (For more information see Ch. 15)
If you have technical concerns notify the District or Regional office and/or Approvals branch of the MOE (For more information see Ch. 9)
If you're concerned about risk assessment, remediation, or record of site condition consider reporting suspected violations to Investigations and Enforcement Branch (IEB) office of MOE (For more information see Ch. 9)
If you're concerned about access to information, or the lack of remediation or enforcement, consider community organizing around the issue or joining a campaign

## ACRONYMS

ACTO – Advocacy Center for Tenants Ontario
ARA – Aggregate Resources Act
CEAA- Canadian Environmental Assessment Act
CELA – Canadian Environmental Law Association
CEPA – Canadian Environmental Protection Act
C of A – certificate of approval
COA – Canada-Ontario Agreement
CCPSA – Canadian Consumer Product Safety Act
CRO – Clinic Resource Office
CWA – Clean Water Act
CWRA – Canadian Water Resources Association
CWWA – Canadian Waste Water Association
EA – Environmental assessment
EAA – Environmental Assessment Act
EASR – Environmental Approval and Sector Registry
EBR – Environmental Bill of Rights
ECA – environmental compliance approval
ECO – Environmental Commissioner of Ontario
EHIC – Environmental Health Institute of Canada
EPA – Environmental Protection Act
ERT – Environment Review Tribunal
FIPPA – Freedom of Information and Protection of Privacy Act
FOI – freedom of information
GLWQA – Great Lakes Water Quality Agreement
GLU – Great Lakes United
HPPA – Health Protection and Promotion Act
ISAC – Income Security Advocacy Centre
JR – judicial review
LAO – Legal Aid Ontario
LaMP(s) – Lakewide Management Plans
LIEN – Low Income Energy Network
LOW – Lake Ontario Waterkeeper
LTB – Landlord and Tenant Board
LTA – leave to appeal
LR – Law reform
OMAFRA – Ontario Ministry of Agriculture, Food and Rural Affairs
OMB – Ontario Municipal Board
MNR – Ministry of Natural Resources
MOU – memorandum of understanding
MOE – Ministry of the Environment
MOT – Ministry of Transportation
MAA – Ministry of Aboriginal Affairs
MAG – Ministry of Attorney General

MEI – Ministry of Energy and Infrastructure
NMA – Nutrient Management Act
PLE – public legal education
POP(s) – persistent organic pollutant(s)
PTTW – permit to take water
RAC - Regulatory Advisory Committee (first established in 1992 to help implement environmental assessment legislation and advise the environment minister)
RAP(s) – remedial action plan(s)
RGI – rent geared to income
SDWA – Safe Drinking Water Act

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[1] Michael Buzzelli, *Environmental Justice in Canada – It Matters Where You Livei,* Canadian Policy Research Networks Research Report, (December 2008) at 1.

[2] *Ibid* at 11.

[3] *Ibid.*

[4] Theresa McClenaghan, "Priority populations and issues in Canada" (Presentation delivered at Canadian Public Health Association Annual Conference Workshop, 3 June 2008) [unpublished].

[5] *Ibid.*

[6] *Ibid.*

[7] *Ibid.*

[8] Canadian Partnership for Children's Health and the Environment, *Child Health and the Environment - A Primer (*2005), online: <http://www.healthyenvironmentforkids.ca/resources/child-health-and-environment-primer>.

[9] Health Canada, *Vulnerable Populations* (2008), online: <www.hc-sc.gc.ca/ewh-semt/pubs/contaminants/air_quality-eng.php> .

[10] *Supra* note 8 at 4-5.

[11] Andil Gosine & Cheryl Teelucksingh, *Environmental Justice and Racism in Canada* (Toronto: Emond Montgomery Publications Limited, 2008) at 4.

[12] R.D. Bullard., "Environmental Justice: It's more than waste facility siting" (1996) 77: Social Sciences Quarterly, 493 at 497.

[13] *Supra* note 2 at 5.

[14] See EPA Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations* (1994) and EPA, *EPA's Action Development Process: Interim Guidance on Considering Environmental Justice During the Development of an Action* (July 2010), online: <http://www.epa.gov/compliance/ej/resources/policy/ej-rulemaking.html>.

[15] See Ontario, Ministry of Environment, *Statement of Environmental Values*, online at <http://www.ebr.gov.on.ca/ERS-WEB-External/content/sev.jsp?pageName=sevList&subPageName=10001>.

[16] World Health Organization, online: http://www.who.int/topics/environmental_health/en/

[17] For more information on VOCs please see the Environment Canada website: http://www.ec.gc.ca/cov-voc/default.asp?lang=En&n=59828567-1. For more information on federal government action to reduce VOC emissions from consumer and commercial products, see: http://www.ec.gc.ca/cov-voc/Default.asp?lang=En&n=EFBD1D75-1. See also the "VOC Federal Agenda: Publication of the proposed renewal of the Federal Agenda for the Reduction of Volatile Organic Compounds (VOCs) from Consumer and Commercial Products, online: http://www.ec.gc.ca/cov-voc/default.asp?lang=En&n=424DFC9B-1

[18] Pollution Probe's Primer on VOCs: http://www.pollutionprobe.org/report/vocprimer.pdf; Canadian Partnership for Children's Health and Environment: www.healthyenvironmentforkids.ca; Environment Canada website page on Indoor Air Quality: http://www.hc-sc.gc.ca/ewh-semt/air/index-eng.php

[19] Canadian Environmental Law Association, "Healthy Retrofits: The Case for Better Integration of Children's Environmental Health Protection into Energy Efficiency Programs, March 2011, available online: www.healthyenvironmentforkids.ca/sites/healthyenvironmentforkids.ca/files/CELA773-Healthy-Retrofits-report.pdf. For more information on VOC emissions and health effects see the Environment Canada website page on Indoor Air Quality: http://www.hc-sc.gc.ca/ewh-semt/air/index-eng.php. For information on VOC emissions and children's health, see the website of the Canadian Partnership for Children's Health and the Environment: www.healthyenvironmentforkids.ca

[20] Published by the Canadian Environmental Law Association, March 2011.

[21] For assistance in identifying less toxic alternatives for personal care and household cleaning, see the "Guide to Less Toxic Products" published online by the Environmental Health Association of Nova Scotia: http://www.lesstoxicguide.ca/ For a room-by-room list of recommendations of toxic-free alternatives, see "Alternatives in your Home – Toxic Nation" published online by Environmental Defence: http://environmentaldefence.ca/campaigns/toxic-nation/alternatives-in-your-home

[22] See Health Canada's "Environmental and Workplace Health" webpage, online: http://www.hc-sc.gc.ca/ewh-semt/air/in/poll/construction/organi-eng.php

[23] Canadian Partnership for Children's Health and the Environment, "Playing It Safe Solvents, Glues and Paints - part of the Safe Home Renovations series" online: http://www.healthyenvironmentforkids.ca/sites/healthyenvironmentforkids.ca/files/cpche-resources/Safe_Reno_Solvents_E_F.pdf

[24] Canadian Partnership for Children's Health and the Environment, "Playing It Safe – Safe Renovations: Introduction": http://www.healthyenvironmentforkids.ca/sites/healthyenvironmentforkids.ca/files/cpche-resources/Safe_Reno_Intro_E_F.pdf

[25] Canadian Partnership for Children's Health and the Environment, "Playing It Safe – Safe Renovations: Introduction": http://www.healthyenvironmentforkids.ca/sites/healthyenvironmentforkids.ca/files/cpche-resources/Safe_Reno_Intro_E_F.pdf

[26] Canadian Partnership for Children's Health and the Environment, "Creating Healthy Environments for Kids": http://www.healthyenvironmentforkids.ca/sites/healthyenvironmentforkids.ca/files/cpche-resources/Safe_Reno_Intro_E_F.pdf

[27] Canadian Partnership for Children's Health and the Environment, "Creating Healthy Environments for Kids": http://www.healthyenvironmentforkids.ca/sites/healthyenvironmentforkids.ca/files/cpche-resources/Safe_Reno_Intro_E_F.pdf

[28] Canadian Partnership for Children's Health and the Environment, "Creating Healthy Environments for Kids": http://www.healthyenvironmentforkids.ca/sites/healthyenvironmentforkids.ca/files/cpche-resources/Safe_Reno_Intro_E_F.pdf

[29] Canadian Partnership for Children's Health and the Environment, "Creating Healthy Environments for Kids": http://www.healthyenvironmentforkids.ca/sites/healthyenvironmentforkids.ca/files/cpche-resources/Safe_Reno_Intro_E_F.pdf See also CPCHE Collection of online resources on mercury, available online: http://www.healthyenvironmentforkids.ca/collections/metals-mercury

[30] David Estrin and John Swaigen, "Environment on Trial: A Guide to Ontario Environmental Law and Policy" (Emond Montgomery Publications Limited, 1993) pp 465 – 466.

[31] David Estrin and John Swaigen, "Environment on Trial: A Guide to Ontario Environmental Law and Policy" (Emond Montgomery Publications Limited, 1993) pp 466 - 470.

[32] David Estrin and John Swaigen, "Environment on Trial: A Guide to Ontario Environmental Law and Policy" (Emond Montgomery Publications Limited, 1993) pp 486.

[33] For a more detailed examination of the regulation of outdoor air contaminants, please see: Kathleen Cooper et al., "Environmental Standard Setting and Children's Health" May 25, 2000, online: http://s.cela.ca/files/uploads/Ch5.pdf.

[34] Ramani Nadarajah, "Environmental Approvals and Approvals Reform," presented at: Law Society of Upper Canada: The Six-Minute Environmental Lawyer, October 17, 2011, Toronto at pp 6 - 7.

[35] World Health Organization, "Trade, Foreign Policy, Diplomacy and Health: Food Security", online:,http://www.who.int/trade/glossary/story028/en/

[36] For more information see Health Canada's Survey on 'Household Food Insecurity in Canada', online: http://www.hc-sc.gc.ca/fn-an/surveill/nutrition/commun/insecurit/key-stats-cles-2007-2008-eng.php

[37] "Canadian Community Health Survey, Cycle 2.2, Nutrition (2004): Income-Related Household Food Security in Canada", online: http://www.hc-sc.gc.ca/fn-an/surveill/nutrition/commun/income_food_sec-sec_alim-eng.php
[38] For more information see: http://www.cela.ca/newsevents/fiche-d%E2%80%99information/overview-ontarios-green-energy-act.
[39] B. Richardson and J. Razzaque, "Public Participation in Environmental Decision Making", in B. Richardson and S. Wood (eds), *Environmental Law for Sustainability* (Hart Publishing, 2006), 166 at166.
[40] G.W. Pring and P.Canan, *SLAPPS: Getting Sued for Speaking Out* (Temple University Press, 1996), 83-84.
[41] Ramani Nadarajah, "Environmental Approvals and Approvals Reform," presented at: Law Society of Upper Canada: The Six-Minute Environmental Lawyer, October 17, 2011, Toronto at pp 6 - 7.
[42] Ramani Nadarajah, "Environmental Approvals and Approvals Reform," presented at: Law Society of Upper Canada: The Six-Minute Environmental Lawyer, October 17, 2011, Toronto.
[43] Richard D. Lindgren and Burgandy Dunn, "Environmental Assessment in Ontario: Rhetoric vs. Reality", 21 J. Env. L. & Prac. 279.
[xliv] Ramani Nadarajah, "Environmental Approvals and Approvals Reform," presented at: Law Society of Upper Canada: The Six-Minute Environmental Lawyer, October 17, 2011, Toronto at pp 6 - 7.
[xlv] Ramani Nadarajah, "Environmental Approvals and Approvals Reform," presented at: Law Society of Upper Canada: The Six-Minute Environmental Lawyer, October 17, 2011, Toronto.
[xlvi] Ramani Nadarajah, "Environmental Approvals and Approvals Reform," presented at: Law Society of Upper Canada: The Six-Minute Environmental Lawyer, October 17, 2011, Toronto at pp 6 - 7.
[xlvii] Ramani Nadarajah, "Environmental Approvals and Approvals Reform," presented at: Law Society of Upper Canada: The Six-Minute Environmental Lawyer, October 17, 2011, Toronto.