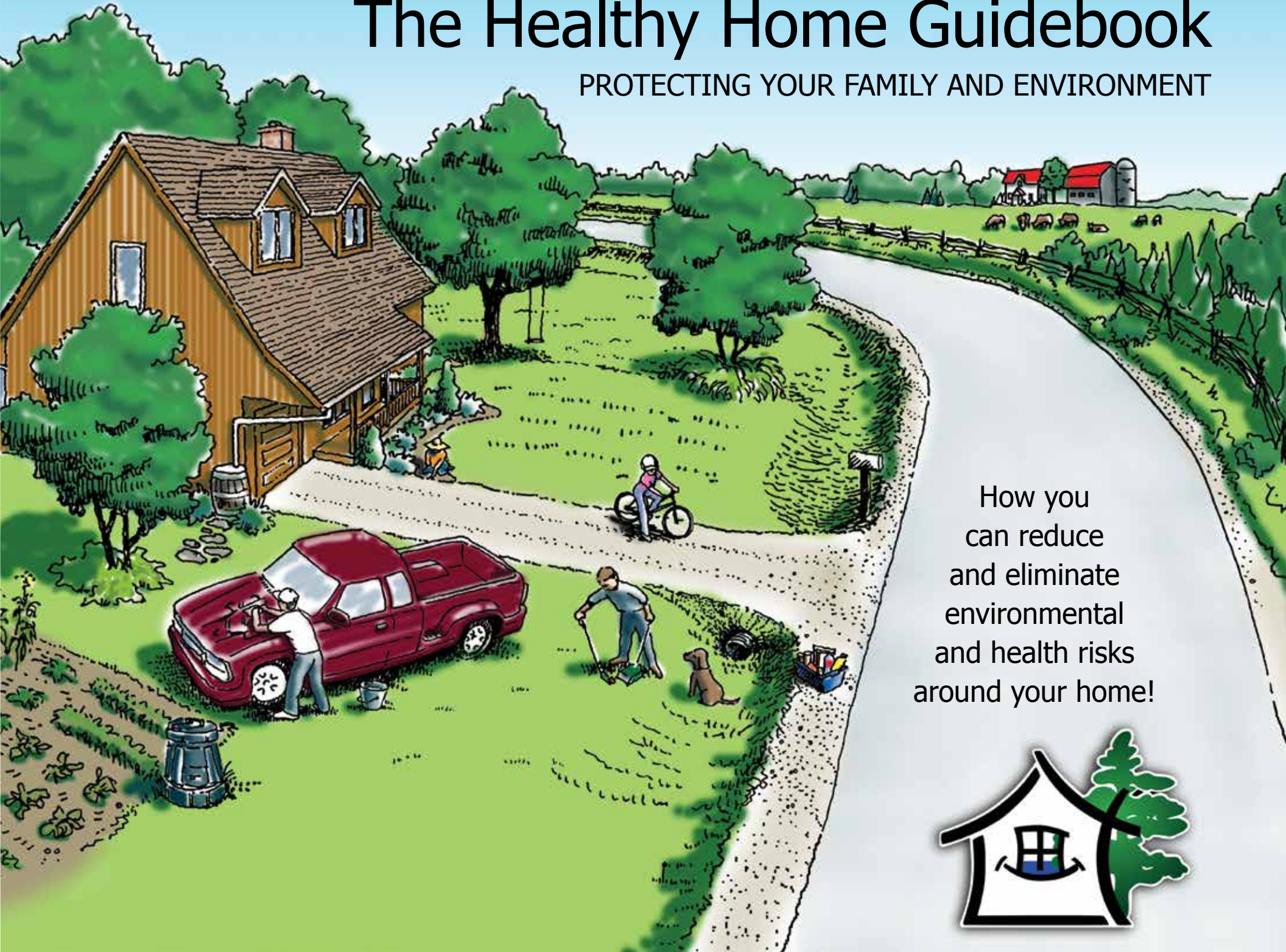


The Healthy Home Guidebook

PROTECTING YOUR FAMILY AND ENVIRONMENT



How you
can reduce
and eliminate
environmental
and health risks
around your home!



The Healthy Home Guidebook

PROTECTING YOUR FAMILY AND ENVIRONMENT

MAY 2024



Produced by the Dundas Environmental Awareness Group with
past support from
South Nation Conservation

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The Ontario Trillium Foundation is an agency of the Government of Ontario





Thanks!

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The residents of Eastern Ontario, Conservation Authorities throughout Ontario, Eastern Ontario Water Resource Committee, Ontario Green Communities, and Stewardship Councils and Working Group partners as listed above for offering to test the first edition of this Guide..

This latest edition builds on the success of the first publication which was coordinated by Carrie Laflamme. The revised 2014 was coordinated by Karen Douglass Cooper. Both efforts were supported by an extensive network of individuals, municipalities, and organizations.

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Welcome to the Healthy Home Guidebook – filled with practical information, tips, tricks and tools to help you protect your family and the environment.

Whether it's air quality, the right cleaning product, alternative energy sources or lessening our impact on the environment, this guide will help you discover ways to live safely and creatively!



You Can Make a Difference!

HOW THIS BOOK CAME ABOUT



The Dundas Environmental Awareness Group is pleased to make this sixth edition of the Healthy Home Guidebook available to the residents of Eastern Ontario to encourage individual efforts in caring for our environment.

This publication provides an opportunity to involve and engage residents and volunteers of all ages from a variety of municipalities, organizations and schools. The Healthy Home Guidebook offers a comprehensive step-by-step approach for families and individuals so that they can make a positive difference at home towards their own health as well as the health of their environment.

We are grateful for past funding from the Ontario Trillium Foundation and support from SNC for the production of The Healthy Home Guidebook and it is with great pleasure that we invite you to read through it and participate in its interactive assessments. It is an opportunity for you to find ways where you can make a difference. Thank you for your interest. We hope you find this information helpful.

Dundas Environmental Awareness Group

*Until 2024, **DEAG** was an incorporated, not-for-profit, grassroots organization that was formed in the spring of 1990 in Eastern Ontario's Dundas County. DEAG has worked through community partnerships to initiate a range of environmental projects which include the establishment of a recycling program and a Household Hazardous Waste Facility. DEAG's most recent partnership with South Nation Conservation and the Ontario Trillium Foundation created the Healthy Home Guidebook for Eastern Ontario.*



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South Nation Conservation has actively worked for over 75 years with many community groups, municipalities and individual landowners to protect the natural resources of the South Nation River Watershed. Our water, forests, fish and wildlife connect us all as we all play a part in a complex ecosystem. Activities in one part of the watershed can have effects upstream as well as downstream and SNC's jurisdiction of 4,200 km², crosses the boundaries of 15 eastern Ontario municipalities. Since 2001, SNC has partnered with DEAG and the Ontario Trillium Foundation to support and improve the protection of human and environmental health through the Healthy Home Guidebook Project.

Home Safe Home

THE HEALTHY HOME

What is a Healthy Home Guidebook? The Healthy Home Guidebook is designed especially for you, the rural homeowner, to rate how your activities affect both the environment and your family's health. Each chapter explains possible risks based on a household topic, and why you should be concerned. By completing the assessment in each chapter, you will become more aware of which of your activities are healthy home care practices and which ones might need to change.

Why should you be concerned? Many people do not realize there are possible risks in and around their homes which can affect their family's health, their home environment and the quality of their drinking water. Knowing about the risks today may help prevent costly cleanups, repairs and legal troubles in the future. In addition, taking steps to cut back on water usage, energy and other resources, can save you money in the long run.

Taking care of your home in an environmentally-sensible way has a bigger impact than you might think. Your home occupies only a small piece of land, but add up all the homes across the country, and you've suddenly covered a lot of ground. That means your homecare activities, along with everyone else's, can have a big impact. Taking care of the environment begins in your own home!



What can you do? Good water quality and a healthy environment are the result of responsible home management choices. What you do in your own backyard does make a difference. Your commitment to establishing a healthier environment for your family today can be positive for future generations. By working together, we can achieve improved water quality for a healthier environment, home and family.

Since the publication of the original Guidebook in 2004, the words 'Climate Change', 'Extreme Weather', 'Plastic Pollution' and 'Sustainability' have become part of the public discourse about the direction of our world. As this is an update of the original version, these are not topics with dedicated headers in this guidebook; however, related information for homeowners is available throughout.

"I am only one, but I am one. I cannot do everything, but I can do something."

~ Edward Everett Hale

You can work with your family, friends and community to undertake the small changes that make a big difference. Use this workbook to explore some unique ways that you can enhance your environment.

Why not make a commitment today to do things differently to improve your well-being, the well-being of your community, the well-being of the planet?

As long ago as 1987, the UN Brundtland Commission defined 'sustainability' as "meeting the needs of the present without compromising the ability of future generations to meet their own needs". There are generally three pillars of sustainability: environmental, societal and economic.



Have fun using this guidebook!

Take your time to complete the assessment in each chapter, either one at a time or all together, then refer to the "How did you rate" quiz to determine your results. In some cases, you will discover easy ways to make a change, while others may be more difficult, and could involve additional costs (e.g. upgrading your well or septic system). If you find yourself in this situation, please contact your local health unit or Conservation Authority to see if grants are available to protect water quality. Keep your guidebook handy to record your maintenance practices in the ledger located at the back, or use the reference section to obtain more specific information and assistance. Our goal is to ensure that the assessment is a useful and practical document for you and your family in both short- and long-term home management planning.

Taking the quiz – how did you rate?

In each chapter, you are asked to participate in a quiz. Please refer back to this section to find out how you rate!

- Yes** Congratulations, if you answered YES to every question. There are LOW health and environmental risks to your family and home. Keep up the good work!
- Sometimes** If you answered SOMETIMES for some of the questions, please be careful...there MAY BE health and environmental risks. Evaluate the risk and determine how you can reduce it. Read the chapter, and check out the reference section to look for ways to improve your situation.
- No** WARNING! If you answered NO to any question, there are likely health and environmental risks to your family and home. Action steps are required. Review the chapter for ways to reduce or eliminate the risks. Don't forget to use the reference section for additional information.
- N/A** If you answered NOT APPLICABLE to any question, an environmental risk does not apply to your family and home.

Getting To Know Your Land

ASSESSING YOUR PROPERTY

We are all part of a watershed. Why is it important? A watershed is an area of land that drains into a river. Rain and snow drain through the soil or run over land into small streams and end up in major rivers. Everyone lives in a watershed. Our watersheds provide water for drinking, irrigation and industry. Streams are appreciated not only for their beauty, but for boating, fishing and swimming. Wildlife need healthy watersheds for food and shelter. Activities farther upstream may affect the quality or quantity of water that passes in front of your home.

Why assess your property? Every homeowner's property has its own unique set of natural features that cannot be changed. Some drinking water sources are naturally more protected than others. For example, pesticides or a failing septic system could impact drinking water sources depending on soil structure and depth of water table.

How do you assess your property? There are two simple steps involved. Complete the assessment questions on the following page to help you determine the natural features of your property, then complete a sketch of your property to show landmark features in relation to your home.



What can you do? You can adjust your activities once your sketch is completed. Is your fuel tank too close to your well? Have you spread pesticides too close to your well or open water? Is your doghouse located too close to your well, with potential animal waste contaminating your drinking water? Your property assessment will be a good reference when planning future activities, and will help in determining what adjustments to make in those areas needing attention.

Evaluate activities on your property. Find out if they affect the quality of your water and your environment!

Eavestrough or sump pump drainage:

Direct these to the lawn or flowerbed and away from the foundation and paved surfaces.

Pool drainage:

Direct the water to a grassy area away from surface water. Drain it slowly over a few days.

ASSESSING YOUR PROPERTY

What soil type do you have?

Clay is sticky. Sand is gritty and crumbly. And silt or loam is somewhere in between!

How deep is your soil?

Have you had any construction on your property that has reached bedrock? If in doubt, talk to neighbours or the previous owner.

What is the depth to the water table?

Your water table will fluctuate throughout the year. You will eventually reach saturated soil the deeper you dig. Again, has construction on your property reached your water table?
Review your records.

The natural features of your property can affect the impact of environmental problems if they do occur. Circle and tally the conditions that apply to your property, and record your risk on the right.

Natural features	Low risk	Medium risk	High risk	Your risk
Soil type	Clay	Silt or loam	Sand or gravel	
Soil depth to bedrock	over 3.5 metres (12 feet)	1 - 3.5 metres (3 - 12 feet)	less than 1 metre (less than 3 feet)	
Depth to water table	over 6 metres (20 feet)	3 - 6 metres (10 - 20 feet)	less than 3 metres (10 feet)	
Topography or slope	Level	Sloping	Hilly	
Nearness to surface water	over 30 metres (100 feet)	7.5 - 30 metres (25 - 100 feet)	less than 7.5 metres (25 feet)	
Name of watershed you live in?				
<ul style="list-style-type: none"> • Clay – Is sticky, and very dense and not very permeable except when it dries out and cracks develop. **NB: when clay dries out it develops deep cracks that provide rapid movement of surface water and contaminants to the water table. Research has shown that a clay-lined manure storage pit, if allowed to dry out, was far more apt to allow contaminants into the water table than a sand-lined one, which sealed and stayed sealed even when very dry. • Silt / Loam – Is more permeable than clay and denser than sand or gravel • Sand / Gravel are porous substances and water seeps through easily. 				

Do the best you can with these questions. Neighbours or previous owners may be able to help you. Information on your well record may also help. Contact your local Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), local municipality or local Conservation Authority for further assistance.

Your Property Layout

= ___ feet / metres

A large grid for drawing a property layout. The grid is composed of 20 columns and 20 rows of small squares, providing a scale for sketching the property.

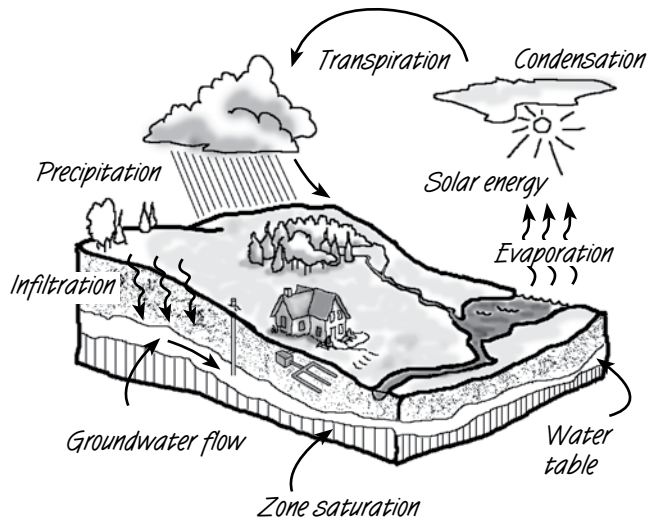
What to include on the sketch of your property

- house and garage
- barn, outbuildings and sheds
- road and driveways
- sewage system drainfields
- all drinking wells
- heating oil or fuel storage tanks
- eavestrough drains
- sump pump drains
- swimming pool backwash drains
- lawn area
- flower and vegetable gardens
- open water
- drainage ditches
- doghouses/dog runs
- livestock waste
- pesticide or herbicide storage
- hazardous products and storage, (e.g. paints and solvents)
- other animals
- compost bins

How Well Is Your Well

WELLS AND DRINKING WATER

Where does your drinking water come from? If you live in a rural area, your drinking water probably comes from a well on your property. The well fills with groundwater, which is then pumped into your house. But where does that groundwater originate? And how can you be assured that it's safe for you and your family to drink?



How does the water cycle work? Groundwater is part of the water cycle. Rain and melting snow run off into streams and lakes and/or seep into the ground, nourishing trees and plants. This water then soaks even deeper, collecting in pockets known as aquifers, where, as groundwater, it enters your well. With the help of wind and sun, water can also evaporate into the atmosphere. It returns to Earth as rain or snow, in a continuous water cycle.

Both seepage and evaporation help cleanse our water, but it's important to remember that all the water that we use – for drinking, cooking, laundry, bathing or gardening – returns to the environment, often to the same source it

came from – in poorer condition. Chemicals and other pollutants that we add to our water or dump on to the ground can seriously affect the purity of our drinking water. Sometimes harmful bacteria and other contaminants can leak directly into our wells if they are in poor condition.



What can you do? When your drinking water comes from your own well, it is up to you to test your water regularly, every three to four months, to ensure that it is safe. Contaminated water can cause mild to severe stomach cramps and/or diarrhea. Depending on the contamination, it can even be fatal. Remember even very small amounts of contamination can render your drinking water unsafe. Test your well today!

In the late 1970's and early 1980's it was common practice to bury wells below frost level and, as a result, these wells have never been serviced.

The two most common causes of well water contamination:

① Failure to properly seal the space between the well casing and the hole in the ground (annular space) with cement or bentonite. A faulty seal allows surface water, which may be contaminated with fertilizers, manure, chemicals, or drainage off residential property, to directly enter the well.

② Failure to have the casing extend a minimum of 40 cm (16 in) above ground level or above floor level of well pit. Well casings should never be buried. If they are, contaminated runoff may leak into the well.

Talk to a currently licensed well contractor to discuss how to upgrade your well!

Everyone lives downstream from somebody. Think about your local creek, river or stream. Where does it start? What types of landscapes does it pass through and where does it end up?



Take this quiz to assess potential health and environmental risks in your home!

WELL LOCATION

Yes | Sometimes | No | N/A

Do you...

- know where all the wells (both used and unused) are located on your property? Yes Sometimes No N/A
- know where your neighbour's well is located? Yes Sometimes No N/A
- have a copy of your well record? Yes Sometimes No N/A
- know the type of well you have (dug, drilled, bored or sandpoint)?..... Yes Sometimes No N/A
- know the depth of the well?..... Yes Sometimes No N/A
- know the depth of the casing? Yes Sometimes No N/A
- *have your well located 15 metres (50 feet) or more away from any source of contamination (applies to drilled wells with a water-tight casing to a depth of 6 metres or 20 feet)? Yes Sometimes No N/A
- *have your dug or bored well located 30 metres (100 feet) or more away from any source of contamination? Yes Sometimes No N/A
- maintain a permanent grassed buffer at least 3 metres (10 feet) around your well that is graded away from the well head? Yes Sometimes No N/A
- know if your well is located in an area that is flood-free? Yes Sometimes No N/A
- ensure that surface water cannot reach your well? Yes Sometimes No N/A

WELL MAINTENANCE

Do you...

- watch for changes in the taste, odour and colour of your water? Yes Sometimes No N/A
- test water for bacteria, starting after spring thaw and repeat every four months? Yes Sometimes No N/A
- test water after any major repairs on your well or plumbing? Yes Sometimes No N/A
- test water for nitrate-nitrogen every three years (more often if there is a baby in your house, or if nitrate is a problem in your area)? Yes Sometimes No N/A
- watch for settling of the ground around the outside of the well casing?..... Yes Sometimes No N/A
- have the well pump and distribution systems checked regularly? Yes Sometimes No N/A
- take preventive action near your well against spills on the ground (e.g. fuels, pesticides)? Yes Sometimes No N/A

WELLS AND DRINKING WATER

WELL INSTALLATION AND UPGRADES

Do you....

- | | Yes | Sometimes | No | N/A |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| - ask to see the license* of your well contractor/technician before work begins? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - secure a written contract with the well contractor explaining the work to be performed? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - check that the space between the well casing and the hole in the ground (annular space) is sealed properly with a material such as cement grout, concrete or bentonite? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - *check that the well cap is 40 cm (16 in) or more above ground level? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - *ensure the casing below ground on all wells is a minimum of 6 metres (20 feet) in length? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - check that the sanitary seal or well cap are secure, water-tight, and vermin-proof? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - mound up clean earth around the outside of the well to direct surface runoff away from your well and seed with grass or hay? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - *ensure the well driller supplies you with a copy of the water well record? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

WELL ABANDONMENT

Do you...

- | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| - *ensure abandoned wells (no longer in use) are plugged and sealed properly by a licensed well contractor? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - avoid disposing of any waste in an unused well, recognizing it will pollute the groundwater? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

* Note: Required under *Ontario Water Resources Act*, Regulation 903 (as amended in 2007).

To find out how you rated and what it means, go to page 6.

Did you know?

You cannot smell, see or taste most water problems? Water testing is the only sure way to provide safe water for your family!



What type of well do you have?

There are three main types of wells: drilled, dug or bored, and sand point. You can easily determine the type of well from the well casing. (Pipe or tubing installed to support its sides)

Drilled well

Casing diameter size: 10 - 20 cm
(4 - 8 in)

Dug or bored well

Casing diameter size: 60 - 120 cm
(24 - 48 in)

Sand point well

Casing diameter size: 2.5 - 5.0 cm
(1 - 2 in)

For other contaminants, contact the Ontario Ground Water Association. See Page 65

Two good reasons to regularly test your water.

Water is constantly moving – even if your drinking water is fine today, it may not be tomorrow. Seasonal changes in water quality that occur in shallow wells can be quite noticeable. Water testing is the only sure way to provide safe water for your family.

- ① **Do you suspect bacteria?** Test for bacteria every four months, and after major plumbing work. The Ontario Ministry of Health provides this testing free of charge. You can pick up and drop off your sample water bottles at your local Public Health Unit in your area. If you're not sure of the nearest location, call the info line at Service Ontario at **1-866-532-3161**. Directions for how to take samples of your water are included with each sample bottle.
- ② **Are there traces of nitrate and sodium?** Nitrates from fertilizers or seepage from a septic tank can contaminate your water, as can sodium if road salt is heavily used in your township. To check your water for other pollutants, contact the Ministry of Environment, Conservation and Parks (MECP) at **1-800-565-4923** to obtain water-testing kit information. Private laboratories will test for these pollutants. Check the Internet for labs in your area.



Test results – what they mean, and what you should do. Possible indicators:

Total coliforms: may indicate that surface water is getting into your well.

E-Coli: contamination by manure or human sewage from a nearby source.

Nitrates: fertilizers or seepage from a septic tank. Infants less than six months old can become sick from drinking formula made with water high in nitrates.

Sodium: water softeners increase the level of sodium. A separate, unsoftened water supply should be used for drinking and cooking. Individuals on sodium-reduced diets should consult their physician if the sodium in their well water exceeds 20 mg/L.

Heavy Metals / Other Toxins: Area industries, improper disposal of e-waste or batteries etc. can lead to the contamination of the water in your well. If you suspect that there may be problems, a special test may be required. MECP has a list of licensed laboratories for additional tests.

If test results show your water is contaminated with bacteria, contact your local Health Unit for instructions on how to disinfect your well. Ask if your water is safe for such other uses as bathing, washing clothes and gardening. Until further testing indicates that your water is safe to drink, use bottled water, or boil it for five minutes.

Prevent contamination and keep your water safe!

Check that your well is constructed to meet all regulations. The MECP – *Ontario Water Resources Act* – regulates water wells. If your well does not meet these requirements, you should contact a licensed well contractor in your area for an estimate on the necessary upgrade. A directory of licensed well contractors is available from the MECP or your local Conservation Authority. Contact information is available at the back of this publication.

Locate potential sources of contamination. Know where your wells are located. Property owners often have more than one well. While many wells are active, some are unused or abandoned. It is important to know where each of these wells can be found.

Keep a copy of the well record for each well on your property. It shows valuable information, and can save time and money. Details, including when the well was constructed, information on the construction, the pump setting depth and the capacity of the well, are included in this record. Your well contractor must provide one copy to the homeowner. To obtain a certified copy of the Well Record, call the MECP at **1-888-396-WELL (9355)**. There is a charge for this service.

Inspect your well annually. Hire a certified well contractor to inspect your well and all its working parts.

Plug abandoned wells. Many rural homeowners have unused or abandoned wells on their property. These wells can leach or dissolve toxins and contaminate operating wells. You are legally responsible for ensuring that unused wells are properly plugged and that your abandoned well is not contaminating your neighbours' well. For information on decommissioning an unused well and on the availability of subsidies, contact your local Conservation Authority.

Test your water. Check for bacteria after the snow has melted and every four months thereafter. Testing is also recommended after any major plumbing work is done.

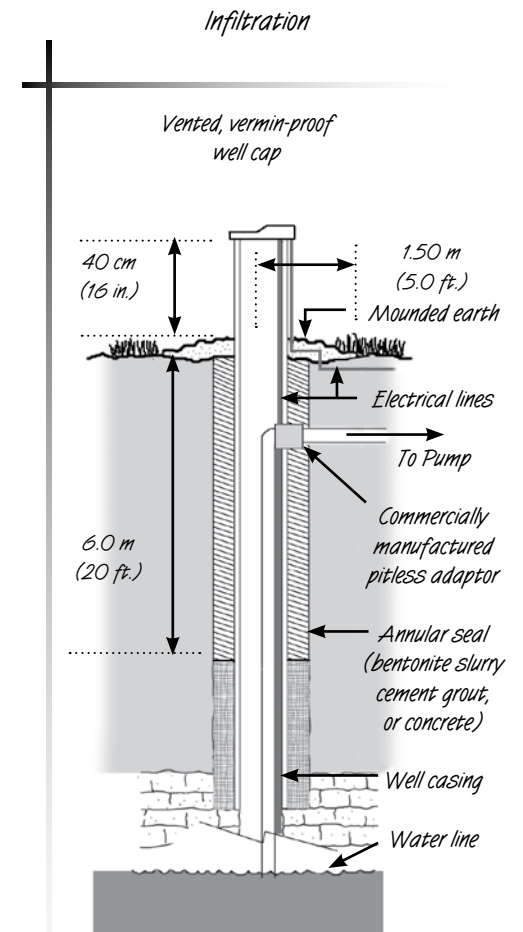


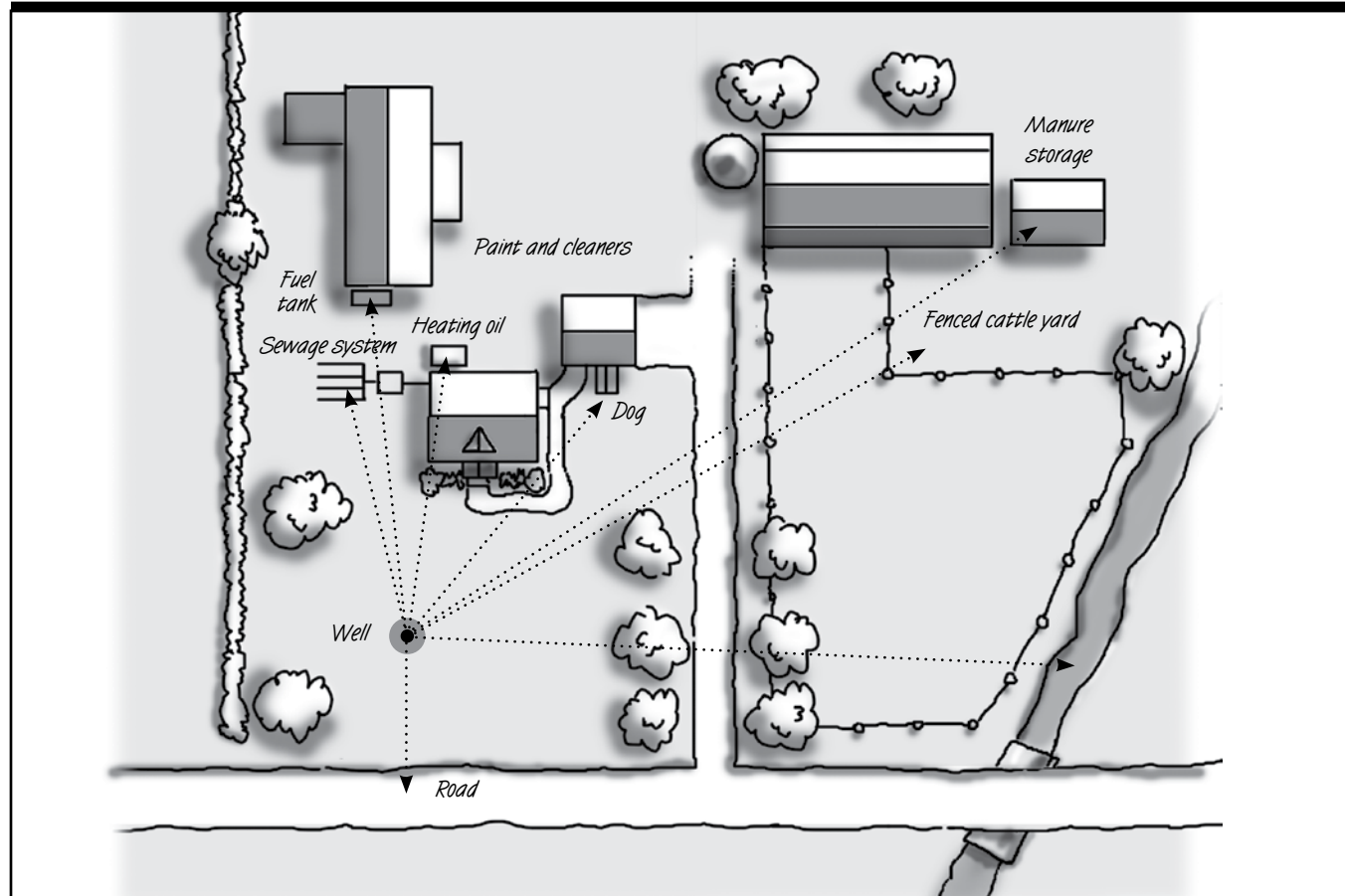
Diagram of a properly constructed drilled well.

Poorly constructed and / or located wells may never provide safe drinking water.

Minimum Separation Distances for Drinking Wells

**Current Ontario Regulations
Ontario Water Resources Act
Regulation 903
(as amended in 2007)**

- A well must be at least 15 metres (50 feet) from any source of pollution if the casing is watertight to a depth of at least 6 metres (20 feet).
- A well must be at least 30 metres (100 feet) away from any source of pollution if the casing is not watertight to a depth of at least 6 metres (20 feet).
- The well casing must be a minimum of 40 cm (16 in) above ground level.
- Casing on a drilled well must be a minimum of 6 metres (20 feet) in length unless that prevents using the only available aquifer in which case, the minimum length is 2.3 metres.
- The well contractor must provide the owner with a one-litre sample of well water for visual examination and measure the well depth in the presence of the owner.
- The well contractor is required to test pump a new well for at least one hour and to measure and record results on the Well Record.
- The well contractor must complete a Water Well Record for any new well construction, upgrades and for all well abandonment. Copies must be submitted to the MECP and the homeowner within two weeks of completion.



Check your property layout on page 9. Is your drilled well at least 15 metres (50 feet), or your dug well at least 30 metres (100 feet) from all sources of contamination? Some possible sources are shown in this diagram.

Note: The minimum separation distance alone does not ensure that the well will be safe from contamination.

The Scoop on Poop (and other stuff)

SEWAGE SYSTEM OPERATIONS

What is wastewater? Wastewater is the water leaving your house from sinks, tubs, toilets and water-using appliances. Homeowners who live in the country are not connected to municipal sanitary sewers, but instead, they provide their own waste treatment services on their own property using an onsite sewage system.

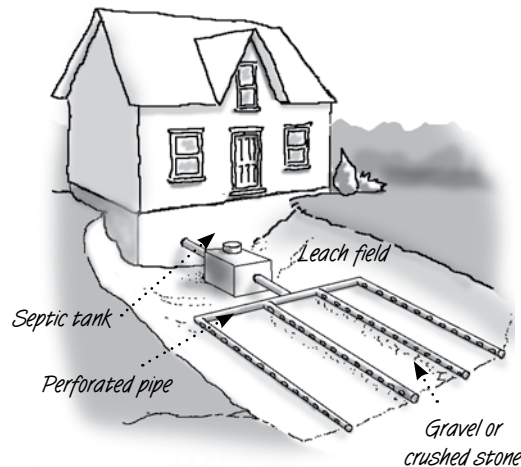
How does your sewage system work? The typical sewage system has two basic parts: a septic tank and a leaching bed, both of which are buried underground. Waste and wastewater enter the

septic tank and settle in three layers:

- 1) The solid waste layer settles to the bottom where natural bacteria in the tank help to partially break down the solids;
- 2) Grease, fat and soap residues rise to the top and form a scum layer;
- 3) The liquid waste layer, or effluent, flows out of the septic tank to the leaching bed;

In the leaching bed:

- 1) The effluent trickles out of pipes, through the gravel layer and into the soil;
- 2) The soil naturally filters the effluent before the water enters the underground water table.



Discovering that your sewage system has failed is an unpleasant experience.



Warning signs of a failing system

- toilet, showers and sinks back up or take longer than usual to drain;
- areas of lush, green grass over the leaching bed, even during dry weather;
- soggy or spongy ground around the septic tank and leaching bed;
- foul odours inside or outside;
- significant algae growth in or around nearby water bodies



What can you do? A failed system can leak contaminants into the water table, your drinking well and nearby streams. Failures are usually due to age, blocked pipes, overuse of water or poor upkeep. This chapter will explain how your sewage system works, and that what goes down your drain affects us all.

If your toilet has not been replaced within the last 10 years, it may be using up to 22 litres (5 gallons) of water per flush. For a family of four, this totals approx. 160,000 litres (35,000 gallons) per year just to flush the toilet!

A water-saving toilet uses as little as 6 - 9 litres (1.5 - 2 gallons) per flush, thereby reducing water usage up to 60 - 70%!

For possible alternative systems such as grey water disposal, composting toilets, tertiary treatment units, look up the Septic Smart PDF at www.ontario.ca

All septic systems must adhere to Part 8 of the Ontario Building Code.



Take this quiz to assess potential health and environmental risks in your home:

WATER CONSERVATION

Yes | Sometimes | No | N/A

Do you...

- use water conserving devices on your shower head, taps and appliances? Yes Sometimes No N/A
- check for leaky faucets or toilets – and repair immediately? Yes Sometimes No N/A
- wash your laundry throughout the week, rather than all in one day?..... Yes Sometimes No N/A

CAREFUL DISPOSAL

Yes | Sometimes | No | N/A

Do you...

- avoid pouring grease or oil down the drain? Yes Sometimes No N/A
- direct water softener discharge away from your sewage system? Yes Sometimes No N/A
- refrain from disposing of any hazardous products down your drain?..... Yes Sometimes No N/A
- refrain from having a sink garbage disposal or grinder? Yes Sometimes No N/A
- avoid using excessive soaps, cleaners, detergents and bleaches?..... Yes Sometimes No N/A
- prevent basement sump pump connections to your septic tank?..... Yes Sometimes No N/A
- prevent non-degradable items from entering your septic tank? Yes Sometimes No N/A

MAINTENANCE

Yes | Sometimes | No | N/A

Do you...

- have your sewage system inspected every 1-2 years by a licensed contractor to determine the amount of sludge and if pumping is necessary* (The Ontario Building Code requires septic tanks be pumped when sludge and scum occupy one third of the septic tank)? Yes Sometimes No N/A
- check for leaks? Yes Sometimes No N/A
- clean the effluent filter, if one is installed?..... Yes Sometimes No N/A
- ensure baffles are functioning properly? Yes Sometimes No N/A
- select only EcoLogo seal products to add to your system? Yes Sometimes No N/A

SEWAGE SYSTEM OPERATIONS

SEWAGE SYSTEM LOCATION

Do you...

Yes | Sometimes | No | N/A

- know where your septic tank and leaching bed are located?..... Yes Sometimes No N/A
- plant grass over the leaching bed to prevent erosion and absorb excessive water? Yes Sometimes No N/A
- refrain from paving the leaching bed area with concrete, asphalt, or interlocking bricks?..... Yes Sometimes No N/A
- keep vehicles, equipment and livestock off your sewage system? Yes Sometimes No N/A
- refrain from planting trees less than 8 m (27 ft) and shrubs less than 6 m (20 ft) from the leaching bed?..... Yes Sometimes No N/A
- divert all eavestroughs away from the leaching bed? Yes Sometimes No N/A
- ensure no lawn sprinklers or sump pump discharge water are in the area of the leaching bed?..... Yes Sometimes No N/A

AGE AND DESIGN

Do you...

Yes | Sometimes | No | N/A

- know the age of your sewage system (systems more than 20 years old are at higher risk of not functioning properly)?..... Yes Sometimes No N/A
- know if your system is located according to the Ontario Building Code minimum clearances (see diagram on page 21)? Yes Sometimes No N/A
- *obtain a permit from the necessary authority, before installing or altering a sewage system? Yes Sometimes No N/A

* Note: Required under Ontario Building Code Regulations

To find out how you rated and what it means, go to page 6.

Remember:

Your septic tank contains deadly gases. Never allow anyone other than a licensed contractor to lean into or enter your septic tank!



Ask a licensed sewage system contractor about recommended devices to extend the life of your system.

Effluent filters are installed on the septic tank outlet to capture small particles in the effluent. Without the filter, clogs can form in the distribution pipe.

Gas bubbles are produced by the bacteria breaking down the wastes in the tank. A gas baffle installed near the septic tank outlet prevents disturbed sludge from entering the leaching bed.

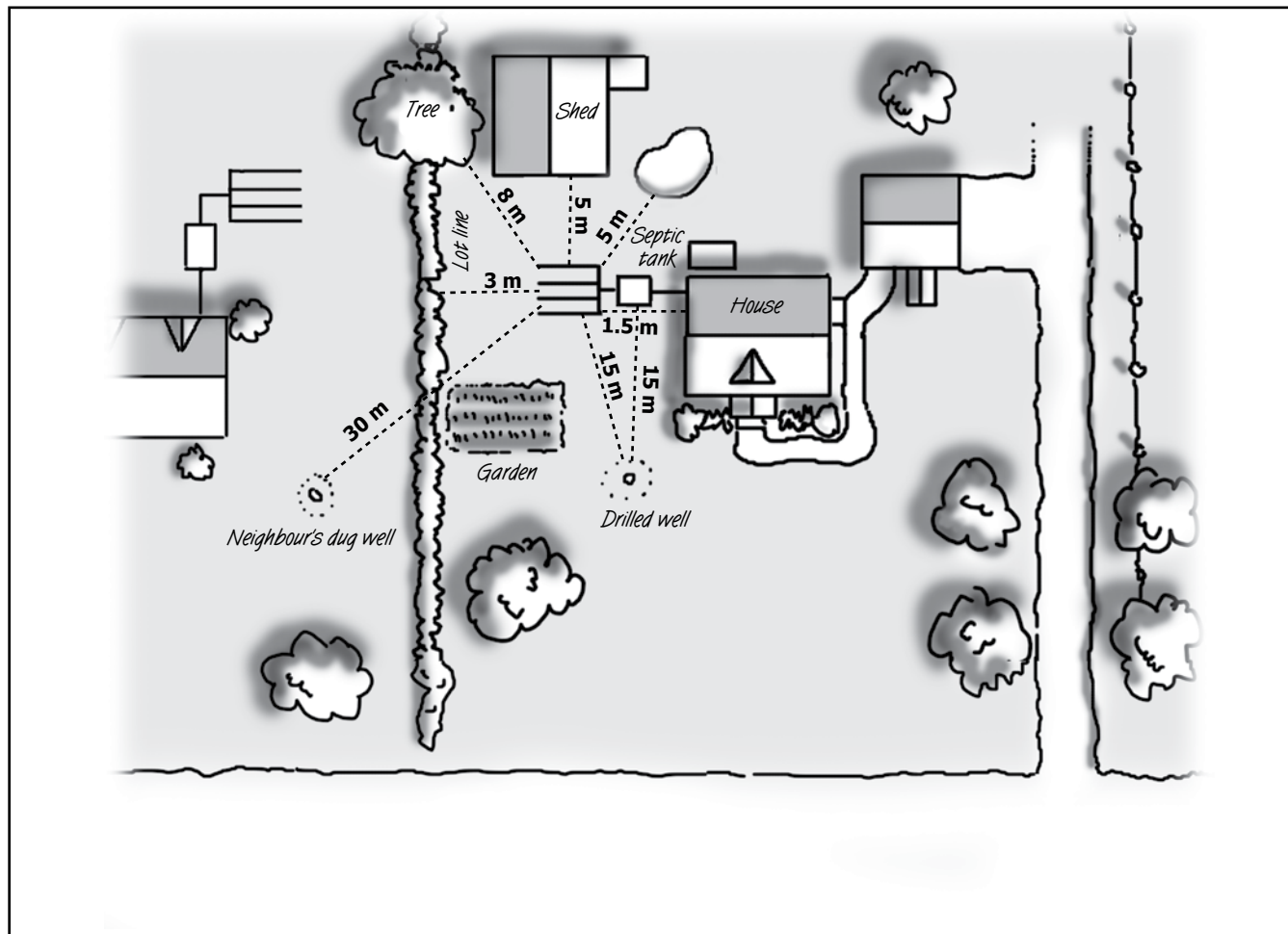
A back flow valve is installed to prevent backup during floods.

6 ways to improve your sewage system:

- 1 Pump your tank regularly.** One of the most common reasons for failure is not having the tank pumped out regularly. Depending on the size of your family, water consumption and the size of your tank, pumping should occur at the same time of year every 2-3 years.
- 2 Spread out the amount of water used.** Sending too much water through the system at one time can result in the water not being separated. Solids can enter and block the holes in the distribution pipes.
- 3 Protect your leaching bed.** Keep the immediately surrounding area grassed to avoid erosion. Don't plant trees or shrubs too close, or cover it with a hard surface. Don't drive over it. Divert water from the sump pump, water softener, or swimming pool backwash, eavestroughs, and runoff from driveways away from the leaching bed.
- 4 Don't use the toilet as a trash can.** Never put cigarette butts, paper towel, sanitary napkins or tampons, condoms, disposable diapers, baby wipes, coffee grounds, dental floss, bandages, kitty litter, fat, grease or oils, loose hair etc., down the toilet! These do not decompose and can cause clogs. Also flushing dead rodents and other small wildlife down the toilet counteracts the good bacteria in your septic system.
- 5 Use environmentally friendly products.** Use phosphate-free soaps and natural cleaning products. Avoid corrosive drain openers, cleaners and bleach. Check for hazardous symbols before you purchase anything.
- 6 Dispose of chemicals and pharmaceuticals at approved special waste sites.** Never flush chemicals into the septic tank. Your sewage system is not designed to treat chemicals and pharmaceuticals. They will contaminate your groundwater. Please note that if anyone in your household is undergoing chemotherapy, check your system regularly to be sure that the chemicals are not interfering with the system's working bacteria.

Legal Requirements for Planning Your System

Check this diagram to see if your sewage system meets all minimum separation distances.



The Ontario Building Code (OBC) regulates the design, construction and maintenance of sewage systems for family homes.

These minimum separation distances are required to protect your sewage system and to help ensure that wastewater from your sewage system cannot reach and contaminate nearby water supplies.

Remember, before construction begins on a new system, or when altering an existing system, a permit is needed from the necessary authority. If you are unsure who that is, check the reference at the end of the book for more information.

If replacing your sewage system or installing a new system, consider an alternate household septic system. Consult the Ontario Rural Wastewater Centre for more information at: www.ontarioruralwastewatercentre.ca

Waste Not, Want Not

THE WASTE-LESS HOME

What is waste? Nearly everything we do leaves behind some kind of waste. Households create garbage. North Americans are the number one garbage producers in the world and Ontario residents have the highest per person rate in Canada: 699 kilos. The amount of waste we bring into our homes is increasing due to excessive packaging and disposable consumer goods. Fortunately, when it comes to trash, we are now slowly learning to reduce the amount we throw away.

Why should you be concerned? There are a number of reasons. The most obvious is that reducing the amount of waste that we generate saves valuable land from being used to dump our garbage. In Canada it costs more than \$1.5 billion every year to dispose of garbage, and Environment and Climate Change Canada reports that there are well over 3,000 landfill sites in Canada. It is important to remember that recycling also saves natural resources, energy and water. When recyclable materials are made into new recycled products, fewer virgin natural resources such as trees, oil and minerals are used.

The manufacturing process for recycled content products requires less energy and water than for non-recycled content products. This benefits our climate because fewer greenhouse gases are emitted during manufacturing. For example, manufacturing one tonne of recycled paper saves 19 trees and 24,000 gallons of water, produces 75% less air pollution; and uses only 60% of the energy used to make virgin paper. Ninety-five percent of the energy is saved by producing a pop can from recycled aluminum, rather than from raw materials. Recycling not only makes sense for the environment but it creates jobs. According to conservancy group – Clean Nova Scotia, incinerating 10,000 tonnes of waste creates just one job; land filling creates six jobs; but to recycle that same 10,000 tonnes of garbage actually creates 36 jobs.



What can you do? Making good choices to reduce and eliminate household waste can help divert waste from landfills, reducing the landfills needed, and preserving our natural resources. Energy is still used in the recycling process and cannot entirely replace the need for raw materials. However, we can all work together to generate less waste in the first place.

The average person in Ontario throws out more than 300 kg (660 lbs) of waste per year. That means an average family of four throws out over 1,200 kg (2,640 lbs) per year!

North America has 8% of the world's population, consumes 1/3 of the world's resources and generates almost half of the world's non-organic garbage. **The best way to keep garbage out of our landfills is to take a moment to consider our purchases in the first place.**

Sometimes less is more!



One of the easiest ways to reduce the amount of garbage going to landfill is to recycle, but not all materials are recyclable.

Check for the recycled symbols before you buy!



• Products that are recyclable



• Products that contain a percentage of recycled materials

Recycling is only half of the cycle. By purchasing products made from materials you put in your Blue Box, you are helping to close the loop on recycling.

Take this quiz to assess potential health and environmental risks in your home!

WASTE ENTERING YOUR HOME

Yes | Sometimes | No | N/A

Do you...

- borrow, rent or share items used infrequently?..... Yes Sometimes No N/A
- use internet and e-mail to receive news, catalogues, and other information, as much as possible?... Yes Sometimes No N/A
- maintain and repair durable items so they will last longer?..... Yes Sometimes No N/A
- share a newspaper or magazine subscription with a neighbour? Yes Sometimes No N/A
- plant a garden where possible (vegetables from your backyard require no packaging)?..... Yes Sometimes No N/A
- make homemade foods which require far less packaging, as often as you can? Yes Sometimes No N/A

ENVIRONMENTALLY FRIENDLY PURCHASES

Yes | Sometimes | No | N/A

Do you...

- buy a product that has less packaging than its competitor (when you have a choice)? Yes Sometimes No N/A
- purchase items that will stand up to rigorous use and not need replacing frequently (e.g. kid's toys, furniture, shoes)?..... Yes Sometimes No N/A
- buy the largest possible container to get the best "product-to-package ratio" (i.e. buy toothpaste in 150 ml rather than 75 ml)?..... Yes Sometimes No N/A
- ask retailers if they participate in a "Take it Back Program," before replacing an old item? Yes Sometimes No N/A
- check if items are sold unpackaged or individually (e.g. nails, wrenches, screwdrivers, etc.)? Yes Sometimes No N/A
- avoid buying disposable items when durable ones are available? Yes Sometimes No N/A
- avoid purchasing items packaged in non-recyclable material?..... Yes Sometimes No N/A
- consider whether you need a bag when only one or two items are purchased?..... Yes Sometimes No N/A
- make an effort to eliminate plastic use in your household?..... Yes Sometimes No N/A

REUSING

Do you...

- | | Yes | Sometimes | No | N/A |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| - use the services of the local library? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - inquire if yarn and cloth scraps, buttons, wallpaper ends etc. can be used by a school or daycare centre? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - have a book or magazine exchange with friends or donate to a hospital, doctor's office or seniors' home? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - buy good used articles through the classifieds, garage sales or consignment stores? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - carry a travel mug and ask that it be filled rather than use disposable? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - use washable napkins and table cloths? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - use canvas or cloth bags (or reuse old plastic bags) when shopping? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - use containers with lids to avoid the need for plastic wraps? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - take your lunch in reusable containers and bag? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - reduce paper use by printing on both sides? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

RECYCLING

Do you...

- | | Yes | Sometimes | No | N/A |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| - check with your municipality to make sure you are recycling all possible products in your local recycling program? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - buy only products whose packaging is recyclable in your municipality (wax cartons or coloured glasses are not always recyclable)? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - buy only rechargeable batteries? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - recycle all motor oil, antifreeze, lead acid batteries and used tires (in Ontario, it's the law!)? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - rinse all containers, remove labels and flatten before placing in your recycling bin? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - recycle where you work (it is estimated, that most fine paper is not recycled in offices)? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To find out how you rated and what it means, go to page 6.



In 2016, the Ontario Government passed a Bill which would effectively assign the Blue Box program to a third party, the Packaging Producer Responsibility Organization Limited (PPRO). As of 2024, many communities were still functioning under the old Blue Box rules. Check with your local municipality for up-to-date information.



Reduce

- Use some foresight. Think about your purchases and the amount of waste they generate before you buy. Take your purchase home in a re-usable shopping bag.

Reuse

- Draw on your creativity and extend the life of the things you buy.

Recycle

- Make it a common occurrence; it's easier than ever to carry out with roadside recycling programs!

Respond

- Let manufacturers know that you will not purchase items that come with excessive packaging.

One person can make a difference! Every little bit helps. Get your whole family involved to help reduce waste in the environment, while saving money.

Just look at these facts:

Paper accounts for 75% of the materials recycled in Ontario. Years ago, only newspaper and cardboard were recycled, but many municipalities now recycle fine paper, box board (i.e. cereal boxes), telephone books and magazines. Cardboard boxes and box board can contain up to 100% recycled paper products, while fine paper products can be recycled to make tissue, writing and printing paper.

Glass accounts for 14% of the materials recycled in Ontario. It is 100% recyclable and can be used over and over again. It is estimated that over 80% of glass is reused or recycled. When recycled glass is used to make a new glass bottle, enough energy is saved to keep a 100-watt light bulb burning for 4 hours.

Metals account for 6.5% of the materials recycled in Ontario (this includes aluminum and steel). Aluminum is the most valuable item in the blue box. It is used for such things as pop cans, food containers, candy bar wrappers and car bodies. It is estimated between 75% - 85% of pop cans end up in the blue box. Manufacturing aluminum cans from recycled material saves 95% in energy. Recycling just one aluminum can will save enough money to light one 100 watt bulb for 20 hours or run a television for 3 hours. Steel has been recycled for over 100 years. While it is used to make all kinds of material, its main use is for food cans and appliances. Steel cans are made with a minimum of 25% recycled steel.

Plastics account for 3.5% of materials recycled in Ontario. Oil and natural (i.e. fossil) gas are the most important raw materials used in plastics production. Each plastic container has a code imprinted on its bottom surface to help recyclers sort the containers by resin type. Soft drink bottles (PETE 1) are the most commonly recycled household plastic. It is recycled into fibre for carpets, blankets, clothing (arctic fleece) and stuffing for ski jackets and upholstery. Plastic margarine and yogurt containers can be recycled into auto-parts, patio furniture or hairbrushes.

A Few Words About Plastic – the good . . . and the bad . . .

Plastic is ubiquitous in our world. It is used for everything from plastic wrap (keeping our food fresh and safe) to furniture to medical devices, toys, clothing and even transportation. Its benefits, however, are not without a cost to our world.

United Nations Environmental Program:

Every day, the equivalent of 2,000 garbage trucks full of plastic are dumped into the world's oceans, rivers and lakes . . . a global problem. www.unep.org

Geneva Environment Network:

Plastics are the largest, most harmful and persistent element of marine litter, accounting for at least 85% of total marine waste. genevaenvironmentnetwork.org

Environmental Defence:

Less than 11% of Canada's plastics get recycled. The rest end up in our landfills, lakes, parks and oceans, destroying ecosystems and leaking toxic chemicals. environmentaldefence.ca

Earth Day Organization:

Evidence is mounting that plastics, micro plastics and their additive chemicals pose potentially serious health risks to humans, with babies and infants being especially vulnerable.

www.earthday.org/wp-content/uploads/2023/11/BVP-Report.pdf

Approximately 35% of municipal solid waste is due to packaging.



As of April 2024, this information was current in most municipalities.

New Regulations are anticipated shortly.

Check with your local municipality.

Plastics – check which plastics your municipality recycles. Rinse, remove and discard plastic caps. Place bottles in your Blue Box.



PETE - beverage and food bottles (i.e. 2 litre pop bottles – all municipalities recycle)



HDPE - beverage and food, ice cream or detergent bottles - all municipalities recycle



Clear deli food packaging and vegetable oil bottles are generally not recycled in blue box programs



LDPE - carry-out grocery bags, bread bags, frozen food bags included in many Blue Box programs



PP - common uses are margarine and yogurt containers, included in many Blue Box programs



PS - common uses are foam cups, trays and take-out food containers. These are generally not included in Blue Box programs



Code 7 - bottles contain several resins. Generally not included in Blue Box programs

Preparing for collection day!

When recycling began, the Blue Box was what we took to the end of the driveway. Today, recycling is taking on a new look. Some municipalities have included black and green boxes into their waste management colour scheme. Check with your local municipality for its recycling pick-up schedule as well as for procedures and a list of all acceptable materials.

• Glass food and beverage bottles, and jars:

- Empty, rinse and remove lids and labels
- Remove caps and discard with garbage
- Place all loosely in Blue Box

• Newspaper, inserts, magazines, phone books, paperbacks and fine household paper:

- Bag and bundle together
- Place inside or beside Blue Box if full
- Secure papers so they don't blow away

• Corrugated boxes:

- Flatten and bundle with string
- Place inside or beside Blue Box if full

• Boxboard:

- Includes cereal, cookie, cracker, laundry detergent and tissue boxes and egg cartons (recycle drinking boxes or milk cartons)
- Remove liners and plastic attachments
- Flatten and bundle together by stuffing into larger boxboard or tie with string

• Food and beverage cans:

- Empty, rinse and place loosely in Blue Box
- Cans should be crushed if possible

DO NOT INCLUDE THESE IN YOUR BLUE BOX:

- wax paper
- toys
- light bulbs
- window panes
- ceramics
- drinking glasses or broken glass
- household hazardous waste
- batteries
- Styrofoam
- Tetrapaks
- Paper drinking cups



The Danger Zone

HAZARDOUS PRODUCTS AND LIQUID FUELS

What is household hazardous waste? Whether you realize it or not, you probably have products like these lurking under your kitchen sink, in the bathroom, laundry room, garage, workshop, and even in your family room. Hazardous waste can include such items as household cleaners, pesticides, garden products, personal care products, fluorescent light bulbs, batteries, automotive products, paints, solvents, medicines and electronics – just to name a few.

Why should you be concerned? Household hazardous products are often overused or improperly used and disposed of. These products can contaminate our environment and affect our health. Wastes that are poured down drains end up in our lakes and rivers, and can kill the microbes found in your sewage system that neutralize fecal coliform bacteria. Wastes dumped on the ground or in a landfill can pollute the groundwater that feeds our wells, and may have serious impacts on your family's health. Children are especially vulnerable to chemical contamination.

Some of the most common health problems resulting from improper use or overuse of hazardous products are skin irritations and watery eyes. More serious problems are burns, breathing difficulties, poisoning and even cancer.



Halt

– Stop and think...do I really need this product?

Heed

– Be warned. Use only what you need.

Handle

– Take care! Recycle or dispose of wastes only through designated programs. Store products in proper and secure ways.



How to read hazardous symbols:

Type of hazard:



Poison



Explosive



Flammable



Corrosive

Degree of hazard:



Danger

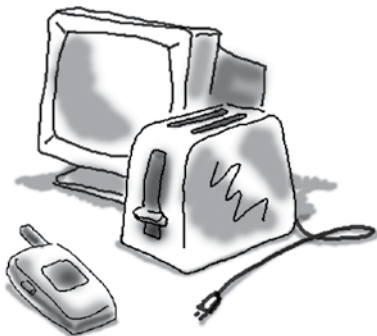


Caution



Warning

E-Waste is an ever-expanding global problem. More than 140,000 tonnes of computer equipment, phones, televisions, stereos and small home appliances accumulate in Canada's landfills every year. Over 35 toxic materials can be found in your home computer alone. Disposal and/or improper recycling of electronic waste pose significant problems to health and the environment. Check with your local municipality to learn about responsible reuse, recycling and disposal options for electronic items in your area.



Take this quiz to assess potential health and environmental risks in your home!

PURCHASING

Yes | Sometimes | No | N/A

Do you...

- know the hazardous product symbols and check for them before purchasing products?
- think carefully before buying a product (check to see if you already have something similar)?
- always read the label to make sure a product will do what you expect it to?.....
- get just enough to do the job when purchasing a product?
- look for non-hazardous or less hazardous substitutes for each job?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PRODUCT USE

Yes | Sometimes | No | N/A

Do you...

- follow the directions listed on the product?
- use only phosphate-free and biodegradable soaps and cleaners?.....
- ensure the area is well-ventilated?
- take precautions for spills when using products that are hazardous?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

STORAGE

Yes | Sometimes | No | N/A

Do you...

- make sure containers are not broken and are securely capped and sealed for storage?
- keep unused hazardous products in their original containers in a safe, well-ventilated place (away from children, pets, and sources of heat until they can be disposed of on a special collection day)?.....
- make sure unused hazardous products are not poured down the drain, storm sewers, in waterways or on the ground?.....
- make sure not to mix chemical products or their waste?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HAZARDOUS PRODUCTS AND LIQUID FUELS

RECYCLING AND DISPOSAL

Yes | Sometimes | No | N/A

Do you...

- know when your community has household hazardous waste (HHW) collection programs, and then participate?.....
- rinse all hazardous product containers three or four times, with the rinsings being dispersed in the area of application, and then recycle the containers?.....
- refrain from burning hazardous products, knowing it will create toxins in the air and soil?
- refrain from burying leftover hazardous products or containers in your yard or garden?
- take expired or unused medicines back to pharmacies or HHW depots for proper disposal

VEHICLE CARE

Do you...

- complete regular checkups to ensure your car is not leaking oil, gas or antifreeze?
- take used motor oil, antifreeze, car batteries and used tires to service stations, recycling centres or HHW depots?.....
- wash your vehicle on a gravel or grass area that drains to the yard, away from ditches, municipal drains or storm drains?

To find out how you rated and what it means, go to page 6.

Look before you buy. Products bearing the EcoLogo are made in a way to help reduce hazardous by-products. EcoLogo products also improve energy efficiency, are reusable or provide other environmental benefits.



The most common products collected at most Household Hazardous Waste Collection Depots are paints and paint products.



5 steps to a successful paint project

Waste paint threatens the environment, wildlife and human health. Before you get started, learn more about how to handle your next paint project safely!

1

Buy the right amount!

Most paint projects require about 1 gallon of paint to cover 400 sq. ft. of smooth surface. Read the label and make sure you take measurements beforehand. You can save money and avoid waste! Store paint at room temperature so that if you do have waste paint your local Hazardous Waste Depot can recycle it.

2

Choose the right paint

Latex paint is a better choice than oil based for most projects. Oil-based paints are not available in Canada except for some specialty products.

3

Paint safely

Be sure there is adequate ventilation by opening windows and doors or using fans.

4

Use all paint and recycle

Still have paint left over? Instead of disposing of it, apply another coat, use it for touchups, stencils, give it to friends or community projects, revive your shed or dog house, or use as a primer. Empty paint cans can be recycled by placing them in the blue box with their covers off.

5

Dispose of paint properly

For larger amounts of latex paint (more than 1 inch), all oil based paints and other solvents such as turpentine, take it to your nearest HHW depot.

Please note: For small amounts of left over latex paint 1 inch (or less), dry it out by opening the can and letting the liquid evaporate outdoors in a safe area, away from kids and pets. Contact your municipal waste department for proper disposal methods for paint cans.

Household cleaning products – the old fashioned way! Get started with basic, economical and environmentally safe ingredients that still get the job done.



Eco-Shopping List:

- **Baking soda**
All purpose, non-toxic cleaner. It cleans, deodorizes, removes stains, scours and polishes.
- **Borax (sodium borate)**
Alternative to bleach. It deodorizes, removes stains and odours, and boosts the cleaning power of soap.
- **Lemon juice**
Cuts through grease, removes perspiration and other stains on clothing, aluminum and porcelain.
- **Pure soap**
Cleans everything!
- **White vinegar**
Cuts grease, removes stains, mildew and wax buildup. A great water softener!
- **Washing soda (sodium carbonate)**
Cleans clothes, softens water, cuts grease and disinfects. It also increases the cleaning power of soap.
- **Pack it all up in a reusable shopping bag.**

Generations ago, families relied on simple ingredients to clean their homes. Today, more and more people are realizing the wisdom of days gone by and are turning away from harsh commercial cleansers, opting, instead, for safer, gentler, homemade or environmentally-friendly alternatives. The little amount of extra work is worth it, with savings to your health, your environment, and your pocketbook!

The Environmental Health Association of Nova Scotia has a wealth of information on healthy cleaning alternatives at their website - www.lesstoxicguide.ca



On The Greener Side

HEALTHY LAWNS AND GARDENS

What makes a healthy lawn and garden? Some people dream of weed- and pest-free lawns and gardens, with perfect flowers, thick green grass, lounge chairs, and a great spot for playing catch and barbecuing. This is healthy, depending on how it is achieved. Trying to maintain a 100% weed- and pest-free lawn by turning to a quick-fix chemical solution is not the answer. It is estimated that upwards of \$78 million per year is spent by homeowners on herbicides, insecticides and pesticides in Canada.

Why should you be concerned? Some activities can threaten your family's health and your environment. If you apply high nitrogen fertilizers and pesticides at the wrong time or in the wrong amount, you may make conditions worse. Insect and disease problems can increase and damage the soil and the health of your lawn. Rainwater can wash fertilizers and pesticides from lawns into local water ways and contaminate drinking wells. People – especially children – are susceptible when playing on lawns and surfaces that have had pesticides applied. A recent study by the Ontario College of Family Physicians states that Canadian children face 'undeniable risks' from exposure to pesticides. This exposure can be from food and water, or from surface contact from lawn and garden spraying. According to a study by the National Research Council and Academy of Science in the U.S., children whose parents use pesticides in their homes and gardens are six times more likely to get childhood leukemia than in homes with no pesticides used.



What can you do? In this chapter, you will discover alternatives that exist, in order to make informed gardening decisions. Be a homeowner willing to change your habits to include good management practices that will benefit the health of your family and the environment. Not to mention saving time and money!

A rain barrel placed under eavestrough downspouts will collect water that can be used in your garden.

Watering lawns and gardens makes up more than 30% of our summer water use – when supplies are the lowest and demand is the highest. A screen placed on top of your barrel will prevent mosquitoes and collection of debris.



Pesticide is a term that describes a variety of chemicals including herbicides, fungicides, algaecides, insecticides and rodenticides. These are compounds that must be handled with great care because of the potential for harmful health effects especially in children. Over 22,000 growers in Ontario are trained in pesticide application and safety through the Ontario Grower Pesticide Safety Course. An Ontario farm business that uses pesticides must have at least one Certified Grower or hire a Certified Pesticide Applicator. Many farmers are now turning to specialists to control pests.

Take this quiz to assess potential health and environmental risks in your home!

FERTILIZERS AND PESTICIDES*

Yes | Sometimes | No | N/A

Do you...

- have your soil tested before you or a lawn care service company applies fertilizers?.....
- compost kitchen and yard waste that can later be used as an organic fertilizer on your lawn and garden?
- choose a slow-release, granular, organic fertilizer?
- hand-pick weeds weekly, and over-seed that area afterwards?
- spot spray problem weeds with the proper herbicide at the right time of year (if you must use a chemical)?.....
- avoid application of fertilizer or pesticides on a windy day?
- avoid using more pesticide than is directed by the label (don't be fooled into thinking that twice the amount will do a better job)?
- keep children and pets off lawn after a fertilizer or pesticide has been applied for minimum 3-4 days?
- take protective measures (as directed by the label) when handling pesticides, such as wearing impermeable gloves, long pants, long-sleeved shirts, safety goggles and mask?
- change clothes and wash your hands immediately after applying pesticides or fertilizers?.....
- teach children that pesticides are poisons, and they should not touch them?.....
- keep the telephone number of your area Poison Control Centre near your telephone?.....

*Chapter 11 of the Statutes of Ontario, the *Pesticides Act*, prohibits the use and sale of pesticides that may be used for cosmetic purposes

HEALTHY LAWNS AND GARDENS

LAWN CARE

Do you...

- | | Yes | Sometimes | No | N/A |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| - set the cutting height on your lawn mower at 5 - 6 cm (2.0 - 2.5 in)?..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - maintain sharp mower blades?..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - leave grass clippings on the lawn as mulch?..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - compost grass clippings, if grass is very long?..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - water only when necessary and water deeply using a container placed under your sprinkler to ensure only 2.5 cm (1 in) of water is being used?..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - use a rake to gently remove thatch in the spring? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - aerate compacted soil in the spring and fall to improve root development?..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - over-seed after raking, aerating, or where weeds were removed?..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - accept a few weeds in your garden or lawn?..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - check that grass seed is suitable to your local growing conditions when making a purchase?..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

VEGETABLE AND FLOWERING GARDENS

Do you...

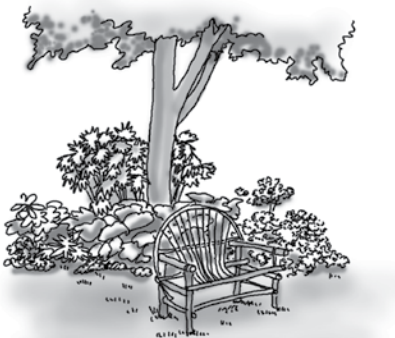
- | | Yes | Sometimes | No | N/A |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| - check weekly for pests or bugs (and their eggs), and remove when found?..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - use natural methods to deter pests (i.e. soap spray)? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - refrain from using fresh manure on food gardens?..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - use aged manure as a fertilizer, applied in the fall and worked deeply into the soil? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - use alternate methods such as crop rotation or companion planting, rather than pesticides, to deter pests?..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - never use pesticides once the plants have fruited? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - carefully check plants before purchasing to ensure they are healthy and pest-free? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - grow suitable plants (native plants are the best choice for trouble-free gardening)?..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Prevention is the key! Pesticides do not address the root cause of problems. A healthy lawn can out-compete most weeds, survive most insect attacks, and fend off most diseases before these problems ever get the upper hand. Applying pesticides may seem to be the easier choice but we need to think of the impact pesticides have on the health and safety of our families as well as the environment.

To find out how you rated and what it means, go to page 6.

Gardeners have real power!

Lawns and gardens across Canada make up hundreds of thousands of hectares. Help to do your part by caring for your lawn naturally to enhance its appearance while keeping it environmentally safe. You don't have to be an expert to grow a healthy lawn. Just keep in mind that the secret is to work with nature.



4 easy steps to create a healthy garden in your backyard!

- 1 Compost your household, yard and garden waste.** Produce your own organic fertilizer and reduce your household garbage by one third! Household organic waste can include fruit and vegetable trimmings, while the garden can contribute leaves, dry grass, plants & weeds without ripe seeds. DO NOT include meat, fish and bones, plastics, fats or oils, dairy products or pet waste.
- 2 Landscape with native plants.** By choosing native plants suited to your lawn conditions, usually no additional watering will be necessary for them to thrive. Often, they will require little maintenance, and usually no chemical fertilizers or herbicides will be needed. Also consider when planting whether your plants will do best in the shade or in sunlight. Contact your local Conservation Authority for more information. This all adds up to time and cost savings as well as a healthier environment for your family to enjoy!
- 3 Control pests by organic means.** Keep the bugs at bay by using a home made spray by mixing ingredients you already have. Combine dishwashing soap and water to create an effective prevention against most insects. A garlic and hot pepper mix is effective against soft bodied insects, while oil, water and soap is better for hard bodied insects.
- 4 Landscaping with native plants and controlling pests organically** are two of the simplest ways to deter insects and disease for annual plants and a great way of reducing chemical insecticide use. Check gardening books for the best plant combinations. Keep a notebook of where your crops are planted from year to year, and what is planted with it. This is a sure-fire way to keep your companion planting and crop rotation in line! Consider naturalizing more areas of your property. Work less and enjoy your property more by allowing some of your mowed areas to return to meadow or wood land.

Developing a healthy lawn and garden.

Create healthy soil. Healthy soil is the basis for a healthy garden. Have your soil tested to find out what nutrients are missing. Sample kits and submission forms are available from any Ontario Ministry of Agriculture, Food and Rural Affairs Office, or look in your Yellow Pages for a lab near you. You can improve your soil by periodically adding organic matter like compost, manure, grass clippings or shredded leaves.

Mow high, often and with sharp blades. Set mowing height at 5 - 6 cm (2.0 - 2.5 in). Long grass blades stay much stronger, prevent weeds from sprouting, shade the roots and prevent drying of soil that encourages longer, healthier roots.

Leave grass clippings or shredded leaves on as mulch. This reduces the need for fertilizers by 30%.

Water deeply, but not too often. Watering properly will help your lawn grow deep roots that make it stronger and less vulnerable to drought. Lawns need no more than one inch of water once a week, early in the morning, only during dry spells. You can let your lawn go brown during the hot summer, and it will return to green when the rain returns.

Correct thatch build-up. Use a rake to gently remove thatch in late spring, when the ground is no longer spongy. Sprinkling a thin layer of topsoil or compost over the area and then scatter grass seed.

Fertilize only if needed. Compost and grass clippings make the best lawn food. Additional fertilizers may be added in the fall if desired, but remember high nitrogen fertilizer encourages leaf growth rather than root growth. Nitrogen may also cause water pollution through run-off. To reduce the risk of this happening, look for an evenly balanced (i.e. 7-7-7) slow release formula.

Are you bugged by grubs?

Grubs are the June beetle larva. They do not like aerated soil. Did you know starling birds feed their young solely on grubs? Their long beaks aerate the soil!



Nematodes (a natural, microscopic organism available from plant nurseries) are an effective control for grubs.

The Do-It-Yourself World

RENOVATING AND DECORATING

What should you be aware of when renovating? Each home is unique, with its own set of circumstances. Whether it is a new or old home, health and environmental hazards may be lurking. Renovating and remodeling creates dust and gases from removing old floor tiles, ceiling tiles or woodwork that can contain chemicals dangerous for inhalation. Installing new carpeting, drapes and furniture creates a “new smell” that can be harmful to breathe. Even the quickest and cheapest way to transform a room – painting – can be unsafe if low toxicity paints and proper ventilation techniques are not used.

Why should you be concerned? With all the do-it-yourself magazines, T.V. shows and mega hardware stores carrying every type of product and gadget imaginable, many families have at least one room of their home undergoing a transformation. Some homeowners may be replacing old carpeting and repainting, while others are tearing down a wall and adding on. No matter how large or small the job, there are hazards you need to be aware of! The long-term health of your family may be at stake!

Asthma rates have increased dramatically in the past 20 years in children less than five years old. Scientists and researchers have mounting evidence showing that even low levels of common environmental and chemical exposure can cause permanent neurological effects, attention deficit disorders, birth defects, infertility in men and women, cancer and “sick building” syndrome.

Unlike the crumbly insulation containing asbestos prior to the 1970's, most asbestos-containing products now used in homes (floor tiles and siding) are hard and do not release fibres under normal use. But beware – fibres may be released during renovations when products are cut or damaged.



What can you do? By reading this section, you will discover ways to reduce or eliminate environmental or health concerns within your own home. Since do-it-yourself renovation practices are on the increase, you need to take responsibility for the products you use.

Any home built before 1978 in Canada most likely contains leaded paint. Lead paint in older homes only becomes a concern when it is disturbed. Dust from renovations can be a source of significant exposure and extra care must be taken.



Take this quiz to assess potential health and environmental risks in your home!

LEAD PAINT IN THE HOME

Yes | Sometimes | No | N/A

Do you...

- paint over chipped areas with an oil-based primer, (without sanding), then apply a latex-based paint, if you suspect lead paint in your home?..... Yes Sometimes No N/A
- wipe away lead paint chips with a damp rag rather than using a vacuum?..... Yes Sometimes No N/A
- refrain from sanding older painted woodwork as lead dust and chips can become lodged in carpets and duct work? Yes Sometimes No N/A
- refrain from using a heat gun to remove old paint from woodwork or furniture, knowing it will produce dangerous lead fumes? Yes Sometimes No N/A
- cover walls with paper or board whenever possible (rather than remove), if lead paint was used? ... Yes Sometimes No N/A
- discard older furniture (i.e. cribs, toys) that contain lead paint?..... Yes Sometimes No N/A
- cover bare soil around the perimeter of the house with grass or shrubs (exterior lead paint flakes can contaminate soil around the perimeter of the house)? Yes Sometimes No N/A
- keep children out of a home that is being renovated? Yes Sometimes No N/A
- test for lead, if you are concerned (lead paint test kits are available at some paint stores)? Yes Sometimes No N/A

LEAD IN WATER

Yes | Sometimes | No | N/A

Do you...

- check that lead-free solder, copper, or plastic pipe and connectors are used for new plumbing and plumbing fixtures (The Canadian Plumbing Code bans lead pipes and solder from being used in new plumbing or in repairs to plumbing for drinking water supplies)? Yes Sometimes No N/A
- use a Brita® or PUR® water filter that will remove more than 90% of lead and other impurities from drinking water, if you are concerned about lead in your water? Yes Sometimes No N/A
- consult a water specialist to test your drinking water, if you are concerned? Yes Sometimes No N/A
- use water from cold taps for drinking, cooking and especially for making baby formula? Yes Sometimes No N/A

ASBESTOS-CONTAINING MATERIALS

Yes | Sometimes | No | N/A

Do you...

- know if your house was built after 1978 (the degree of asbestos containing materials is less)?
- know some of the more common household products that contain asbestos?
- keep activities to a minimum in any areas that have damaged materials containing asbestos?
- seal materials you suspect contain asbestos and are in good condition (i.e. ceiling tiles or textured paints)?.....
- cover materials containing asbestos (soft, crumbly or otherwise damaged) to prevent fibre release?.....
- refrain from sawing, sanding and scraping asbestos-containing materials?
- clean your work area with a damp cloth or mop?.....
- install a new floor directly over the old asbestos floor that needs replacing?
- wear an approved face mask and gloves along with protective clothing if you remove or disturb asbestos material?
- shower thoroughly after completing a renovation job involving asbestos?.....
- seal work areas and keep other people away from that area?.....

FORMALDEHYDE AND CHEMICALS

Yes | Sometimes | No | N/A

Do you...

- ensure there is proper ventilation if toxic substances are used?
- use non-toxic adhesives and caulking?.....
- ask for low emission carpet, underlay or adhesive when installing new carpeting?
- leave your home during carpet installation, and leave the windows open until the smell disappears?
- buy furniture made of solid wood (veneers and press board often contain formaldehyde and other chemicals that can cause respiratory problems)?.....
- wash or air out new bedding, drapes, clothes and other fabric items?
- open boxes containing new products outdoors and let the items air out before bringing them indoors (i.e. flooring tiles, area carpet, veneer furniture)?

If asbestos is so dangerous, why include it in the first place?

Asbestos provides strength, heat insulation and fire resistance. It is combined with a binding material so fibres are not readily released into the air. If it becomes airborne and is inhaled, it can remain in the lungs for years, and may produce health problems later.

A large body of evidence shows that the most common source of lead exposure for children today is lead paint in older housing, and the contaminated dust and soil it generates.

Although formaldehyde affects people differently, it may irritate the eyes, nasal sinuses, throat and lungs, and may trigger asthma. Children and adults have developed allergic reactions (including hives) from exposure to the gas.

3 reasons to be concerned:

- 1 Lead.** In today's environment, lead is practically everywhere. Although our exposure to lead has decreased substantially since the early 1970's (primarily because of the phase-out of lead in gasoline and paint, and the overall reduction of lead in the manufacturing of canned foods), lead is still hazardous. Small amounts of lead can be harmful, especially in infants and young children, and can interfere with the health of an unborn child. Lead poisoning in children may cause reading and learning disabilities.
- 2 Asbestos.** Asbestos is a natural mineral with unusual qualities. It insulates well against heat, fire, electricity and sound, and can be added to materials as diverse as cotton and cement. These properties make it difficult to find a comparable substitute. Asbestos is generally safe when combined with other materials, as long as the material remains bonded so that fibres are not released. In this case, it poses no health risk. However, remodeling or demolition often causes the release of asbestos fibres when materials are cut, scraped and filed. Once inhaled, asbestos can damage lung tissue and cause cancer years after exposure.
- 3 Formaldehyde and chemicals.** Some products are manufactured using many chemicals that can release gases that are harmful when inhaled. For example, formaldehyde is a harsh smelling, colourless gas used as a preservative and disinfectant. It is used today to bond plywood, particle board, carpets and fabrics, and contributes to that new car smell. Symptoms of overexposure include irritation in the eyes, nose and throat, nausea, headaches, dizziness and breathing difficulties.

Precautions while renovating and decorating:

Plan ahead. Before starting any renovation project, determine the best method to create the least amount of dust.

Seal off the area. When renovating, seal off the area to prevent contaminating the air throughout the home. If it's a large project, consider moving out until the job is complete.

Ventilate! Ensure the area you are working in is well ventilated. Ventilate the house when new carpet or furniture is installed.

Wear protective equipment. Use a respirator whenever there are excessive concentrations of dust, fumes, gases or vapours. Wear eye protection to prevent an injury from substantial dust, flying particles or splashes from liquids.

Purchase low-toxicity materials. Select building and construction materials that will not cause indoor air quality problems once installed. Non-toxic adhesives and caulking, water-based paints, low-emission carpet and underlay are recommended.

Choose safe household furnishings. If sensitivity to chemicals and asthma are problems in your family, try to choose products made from solid hardwood. Use gypsum board, plaster or real wood for walls. Wood fibre paneling may emit chemicals.

Call a professional. If you are unsure of the product you are removing, call a specialist trained in removing asbestos, formaldehyde and lead.

Check out www.canada.ca for more information about hazardous substances in the home, such as lead, asbestos and formaldehyde.

The Air We Breathe

HEALTHY AIR QUALITY

How did our air become so polluted? Over the years, buildings have been made more airtight to conserve energy. This also traps in pollutants from chemicals in cleaning products, carpets, paints, tobacco smoke, vaping, mould and mildew, dust and animal dander. Combine this with poor ventilation and elevated moisture levels, and you have the perfect recipe for poor indoor air quality. Outdoors, air pollution is a result of energy use. Heating and cooling buildings, driving vehicles, gas mowers and leaf blowers all contribute to outdoor air pollution, smog, acid rain and climate change.

How does this affect you? There's nothing like going outside for a breath of fresh air. But with the increase in air pollution and smog, sometimes it just doesn't seem that fresh. Outdoors, air pollution is a result of human activities as well as natural disasters such as volcanic eruptions and wildfires. Unfortunately, indoor air often contains the same or higher concentrations of hazardous pollutants as outdoor air.

Common symptoms of exposure to air pollutants include headaches, tiredness, dizziness, nausea, eye, nose and throat irritation, as well as respiratory infections. Asthma, other breathing disorders and even cancer are some of the more serious effects. Children, pregnant women, the elderly and those with chronic illnesses are most susceptible to air quality problems. The risk is especially high for outdoor workers such as farmers or road workers, and people who participate in long and vigorous outdoor exercise during high levels of air pollution. Indoor workers who are exposed to chemicals from paint, solvents and strong cleaners regularly, are at high risk.



What can you do? It's not too late to change! Follow the tips outlined in this chapter and breathe a little easier with improved indoor and outdoor air quality. For example, did you know that trees clean the air? In one year an acre of trees can absorb as much carbon as is produced by a car driven up to 14,000 kilometres. (Source: International Society of Arboriculture).



Signs of Indoor Air Quality Problems

- musty odours caused by dampness and mould growth
- persistent mould
- dust and gases from indoor workshop for pottery, woodworking and painting
- fogged windows most of the winter (poor air circulation)
- high chemical use from cleaners, vaping, tobacco smoke etc. Tobacco smoke contains more than 4,700 chemical compounds.

Children are more susceptible to poor indoor air quality, because their systems are still developing. In Canada, 850,000 children under the age of 14 years suffer from asthma. Many of these cases can be blamed on poor air quality.

Take this quiz to assess potential health and environmental risks in your home!

INDOOR MOISTURE AND MOULD

Yes | Sometimes | No | N/A

Do you...

- use bathroom and kitchen exhaust fans to reduce moisture?..... Yes Sometimes No N/A
- avoid drying clothes indoors or venting dryer indoors?..... Yes Sometimes No N/A
- use a de-humidifier in damp basements? Yes Sometimes No N/A
- remove all visible mould in common areas such as windows or bathtubs? Yes Sometimes No N/A
- prevent moisture from seeping in by sealing cracks on outer walls? Yes Sometimes No N/A
- check eaves troughs and down spouts are not blocked and are properly draining away from your house, to prevent moisture in the basement? Yes Sometimes No N/A

ALLERGENS

Yes | Sometimes | No | N/A

Do you...

- have a smoke-free home?..... Yes Sometimes No N/A
- bathe and groom pets often? Yes Sometimes No N/A
- use window shades made of plastic or wood for easy cleaning?..... Yes Sometimes No N/A
- have smooth surface flooring material such as tile, vinyl or wood in as many areas as possible? Yes Sometimes No N/A
- choose low pile carpets, when carpeting is used? Yes Sometimes No N/A
- store firewood outdoors (storing it indoors can generate mould spores leading to contamination)? .. Yes Sometimes No N/A

INDOOR HOBBIES

Yes | Sometimes | No | N/A

Do you...

- ensure your hobby work area is well-ventilated Yes Sometimes No N/A
- wear respiratory equipment that protects against the specific substance you are using?..... Yes Sometimes No N/A
- store hazardous products in sealed containers away from the living area? Yes Sometimes No N/A
- use alternatives to hazardous materials (i.e. water based contact adhesives and white glue versus an epoxy glue)?..... Yes Sometimes No N/A
- avoid using aerosol spray products (substitute with pump style)? Yes Sometimes No N/A

OUTDOOR USE OF SMALL ENGINES

Yes | Sometimes | No | N/A

Do you...

- limit your use of power lawnmowers, leaf blowers, snow-blowers and other small engines?
- keep all small engine equipment well-maintained?
- use funnels to fill gas, oil and other fuels, to prevent spills?
- choose low maintenance grasses that grow slower?
- landscape with trees and shrubs so there is less grass to mow?
- use hand powered tools as often as possible?

OUTDOOR OPEN BURNING

Yes | Sometimes | No | N/A

Do you...

- recycle and compost rather than burning trash or yard waste (in most municipalities it is illegal)?....
- burn less often (all wood burning activities – stoves or outdoors – add to the total pollution load)?.....
- avoid smoldering fires by using proper burning techniques?
- burn only dry, seasoned wood – never burn wet, green, painted, pressure treated wood or plastic?

SMOG

Yes | Sometimes | No | N/A

Do you...

- avoid outdoor physical activity when air quality advisory levels are high?

VEHICLES AND TRANSPORTATION

Yes | Sometimes | No | N/A

Do you...

- consider fuel efficiency and emission standards before making a vehicle purchase?
- maintain your vehicle according to manufacturer’s recommended maintenance schedule?
- make sure tires are properly inflated?
- drive the speed limit?
- join a car pool for work or activities?
- use a bicycle or walk when possible?

The energy using habits of individual Canadians account for 28% of Canada’s total greenhouse gas emissions.



To find out how you rated and what it means, go to page 6.

In Ontario, smog season lasts from May through September, and because it travels with wind, it can affect sparsely populated areas as well as large urban centres. Burning fuel is a major contributor to smog formation. Reducing your energy use is an important step towards cleaner air. To reduce your exposure to smog, listen for air quality advisory readings in the media, and plan your outdoor activities accordingly.

The MECP provides daily reports on air quality throughout the province. Check out Ontario MECP: Real-time Air Quality Sensor Network.

5 ways to improve outdoor air quality.

- 1 Prevent pollution in your own backyard!** Burning plastics, newspapers, coloured paper, painted wood or pressure-treated wood indoors in a stove or fireplace or outdoors releases dangerous chemicals into the air. Not only do these activities contribute to air pollution, but some of these chemicals can cause cancer. Check with your local municipality on the open burning by-law in your area.
- 2 Limit the use of non-road engines.** Lawn mowers, leaf blowers, snow-blowers, chain saws, and other outdoor power equipment are significant sources of air pollution. The U.S. Environmental Protection Agency reports that a regular lawnmower emits as much hourly pollution as 11 cars and a riding mower as much as 34 cars. Electric equipment is cleaner and is an alternative to devices powered by gasoline engines. Why not use a manual push mower for smaller areas or even replace larger areas of lawn with a native flower meadow? Reduce their use, and keep them well-maintained.
- 3 Be fuel efficient.** Make fuel efficiency the main factor when you purchase your next car. Swap gasoline powered engines for human power versions such as bicycles, canoes, sailboats and push lawn mowers or, next time you buy a car, consider an electric car (EV) or a hybrid car.
- 4 Drive smart.** Drive at moderate speeds and avoid quick starts and stops – it uses less fuel! Keep your car engine tuned and your tires properly inflated. Driving smart can save up to 20% in fuel consumption. When purchasing a new or used vehicle, give some thought to fuel efficiency.
- 5 Be energy efficient.** Maintain your home heating system, insulation and windows. Choose energy-efficient appliances to help keep pollutants out of the air.

Improve air quality inside your home.

Control moisture. Moisture is generated through many daily activities, and provides the ideal environment for mould, mildew and dust mites. Use exhaust fans in the bathroom and kitchen. Check your home for possible cracks where moisture can enter and caulk or seal properly.

Use household products with caution. Cleaning products, personal care products, paints, hobby products and solvents make our lives easier, but these materials are also sources of hundreds of hazardous chemicals. Try to reduce the use of these products. If you must use them, do so outside or in well-ventilated areas.

Improve ventilation. Ventilation is a necessary requirement in a healthy home and it also helps control moisture problems. Consider installing a whole house fan to get things circulating.

Remove all visible mould. Do not cover mould with paint or moisture proof sealer, as it may resurface. Combine one part household bleach, two parts water and a small amount of dishwashing detergent for removal. Wear gloves and a mask to protect your lungs.

Control dust. Keep carpets clean and dry. Vacuum and dust regularly. Dust mites thrive in most mattresses, sofas and carpets but mattresses made from natural rubber are not only dust mite resistant they are not treated with more toxic flame retardant chemicals. Buying a new vacuum cleaner? Check for one with a HEPA (high efficiency particulate arrestance) filter, which removes more than 99% of dust on vacuumed surfaces.

Poorly maintained air conditioners and humidifiers provide the perfect conditions for bacteria and mould. They are blown from the machine's coils into a room, and can aggravate asthma or allergies.



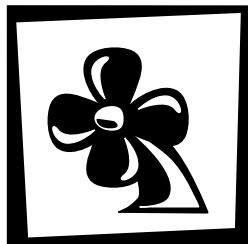
Some Like It Hot

HEATING, COOLING AND ENERGY USE

How does your furnace affect the climate? When oil, natural (fossil) gas*, coal and wood products are burned, a greenhouse gas called carbon dioxide is released into the atmosphere. Methane, another greenhouse gas, is emitted during the production and transport of natural gas, oil and coal. It is irrefutable science that an increase in the amount of greenhouse gases in the atmosphere is causing the earth's temperature to rise. Climate change impacts range from melting ice caps and glaciers resulting in rising sea levels, to changes in precipitation patterns that can lead to wide spread flooding in some regions of the world while inflicting drought on others. Indeed, the increase in violent storms, tornados, droughts, flooding and forest fires is proof of a dramatic change in weather patterns blamed on climate change.

In the ozone layer over the Polar Regions, scientists have found holes believed to be caused by the use of chemicals – primarily chloro fluoro carbons (CFCs) – used in air conditioning, refrigeration and aerosol cans. Due to a significant reduction in the use of CFCs around the world in accordance with the 1989 Montreal Protocol, scientists have now observed a leveling-off, and, in some cases, a reduction in the levels of atmospheric CFCs. Despite this success with CFCs, quantities of other gases and harmful chemicals found in our atmosphere have been increasing, causing a rise in acid rain and smog. Smog can make breathing difficult, and has been attributed to asthma attacks, bronchitis, coughing and chest pain. It can also suppress plant growth, which affects crop yields, trees and vegetation.

Why should you be concerned? Canada's warm summers and cold winters require high energy use for home heating and cooling. Add to that all of the energy-using appliances in our homes, and we have a society that has a growing energy consumption rate with fewer resources to meet the demands. Our expanding energy consumption not only costs us money but it also contributes to air pollution and climate change.



What can you do? Learn about energy efficient products and techniques by going through this chapter. Reduce your energy consumption and get better value for your money!

Signs of Excessive Heat Loss in Homes

- drafts around doors, windows and floors
- difficulty heating rooms
- condensation and frost on windows
- heating bills higher than a home of similar size and climate
- moisture problems in the attic
- pipes freezing
- mice or rodents - if they are getting in, air is getting out
- heating system more than 20 years old
- ice build-up on roof
- single pane windows or cracked windows

*'Natural' gas is a fossil source underneath the earth's surfaces. Its largest component is methane gas. Fossil gas was branded 'natural gas' by the oil industry to make it more acceptable to consumers. It is not natural, safe or clean!!!!

environmentaldefence.ca

Plant shade trees.

They will reduce air conditioning costs by 15 to 50%, and save on heating and cooling costs!



Take this quiz to assess potential health and environmental risks in your home!

HEATING SOURCE AND MAINTENANCE

Yes | Sometimes | No | N/A

Do you...

- clean your furnace filter every two months during heating season?..... Yes Sometimes No N/A
- have your furnace inspected yearly by a heating contractor?..... Yes Sometimes No N/A
- have your chimney cleaned and inspected every year? Yes Sometimes No N/A
- keep temperatures lower when you are away with a programmable thermostat? Yes Sometimes No N/A
- turn off kitchen, bath, ventilating fans as soon as they've done their job? Yes Sometimes No N/A
- open drapes or shades on south-facing windows to allow sunlight to heat the house?..... Yes Sometimes No N/A
- close the drapes and shades at night to reduce the chill from cold windows?..... Yes Sometimes No N/A
- keep your fireplace damper closed when it is not in use? Yes Sometimes No N/A
- check that vents, air intakes and chimneys are not blocked with nests or leaves? Yes Sometimes No N/A

COOLING AND AIR CONDITIONING

Yes | Sometimes | No | N/A

Do you...

- check for the EnerGuide label when you purchase an air conditioner, and choose the most energy-efficient unit for the size of your area?..... Yes Sometimes No N/A
- keep your house closed up tight during hot days? Yes Sometimes No N/A
- use awnings, blinds or drapes to keep direct sunlight from entering your living space?..... Yes Sometimes No N/A
- clean air filters every two months during the summer (dirty air filters cause air quality problems)?..... Yes Sometimes No N/A
- keep the condenser clean and free of leaves and other debris? Yes Sometimes No N/A
- check and clean condensate drain holes or tubes that become blocked on window air conditioners? ... Yes Sometimes No N/A
- have your unit serviced immediately if its performance has deteriorated? Yes Sometimes No N/A
- use outside ventilating kitchen and bathroom fans? Yes Sometimes No N/A
- leave unused rooms unheated or uncooled?..... Yes Sometimes No N/A
- lower the thermostat at night to 17°C? Yes Sometimes No N/A

HEATING, COOLING AND ENERGY USE

ELECTRICITY AND APPLIANCES

Do you...

- check for EnerGuide label when buying new appliances, choosing the most energy-efficient model?
- purchase new energy-efficient appliances if yours are more than 25 years old, if feasible?
- turn off the lights, appliances, television and computer when they're not in use?
- use energy-efficient lighting products (i.e. LED bulbs)?
- use a solar-powered outdoor light when possible?
- defrost meat in the refrigerator overnight, rather than using the microwave?
- use a clothes line for drying laundry when possible, rather than an electric or gas clothes dryer?
- keep your appliances in good working order (a malfunctioning appliance is energy inefficient)?
- use a central air conditioning system as opposed to window AC units?
- run appliances like dishwashers or clothes washers only when full?
- keep shower use down to a reasonable amount of time?
- use "low flow" shower heads to reduce hot water consumption?

Yes | Sometimes | No | N/A

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOME IMPROVEMENTS

Do you...

- check that windows and doors are sealed with caulking / weather-stripping, and replace if loose? ...
- have double or single pane windows with storm windows or plastic covering for winter months?
- check insulation when you renovate and upgrade where needed?
- install a highly insulated hot water tank or an approved insulating blanket on your hot water tank?
- insulate exposed hot water pipes to reduce the heat loss?
- plug, seal and/or remove a fireplace or chimney that is never used?
- install a carbon monoxide detector if you use natural gas, oil, wood, coal or kerosene?
- use the locks on your windows to reduce air leakage?
- plant evergreen trees as wind breaks to reduce exposure to wind?
- plant deciduous trees to provide additional shade in summer?

Yes | Sometimes | No | N/A

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Energy efficient lighting products like LED bulbs last longer and use less energy than regular bulbs.

Today's appliances use at least 55% less energy than those built in the 1980's. So just how much are you paying to keep that old beer fridge running?



To find out how you rated and what it means, go to page 6.

Totally air sealing your home can result in the creation of carbon monoxide gases. This gas is colourless, odourless, tasteless and poisonous. If you heat with wood, oil, 'natural' gas, coal or kerosene, it is recommended that you have a carbon monoxide detector in your home.

Symptoms of low level carbon monoxide poisoning are similar to the flu, and include dizziness, fatigue, headache, nausea and irregular breathing. At high levels, symptoms include confusion, unconsciousness and sometimes death.



4 important facts on energy efficiency:

- ① **Check before you buy – with EnerGuide!** When you shop for a major household appliance or automobile, look to the EnerGuide label to save energy and money. This rating system, managed by Natural Resources Canada, allows consumers to compare the energy-efficiency of different models.



- ② **Don't be fooled by wood heat.** Some homeowners mistakenly believe wood heating reduces their cost and helps the environment by using a renewable fuel. Conventional wood fireplaces are extremely inefficient and release more emissions and pollutants into the air than new units. Advanced combustion wood stoves and fireplaces emit 80-95% fewer pollutants, and are 20% more fuel efficient. Call a heating specialist to have your old unit retrofitted with a new advanced combustion model.

- ③ **Energy efficiency in your home.** Have you ever wondered what the Energy Star on your computer screen was for? It is fast becoming an internationally recognized symbol for energy-efficiency. If you are in the market for a major appliance, home heating or cooling equipment, consumer electronics, office equipment or certain lighting and signing products, just look for the Energy Star mark. In Canada, the international Energy Star symbol is monitored and promoted by Natural Resources Canada's Office of Energy Efficiency. Contact information is available at the back of this publication.



- ④ **Keep it cool, the easy way.** If it is not record-breaking temperature, you can keep your home relatively cool with a whole house fan and ceiling fans combined with practices to block solar heat gain (i.e. closing all windows and doors during day and opening again in early morning and evenings when weather is cooling down). Whole house fans typically use 1/10th of the energy of an air conditioner, and ceiling fans can use about the same electricity as a 100-watt light bulb. Together, they offer a low-cost alternative to modern air conditioning. That's great news for the environment!

Tips and tools for energy efficiency.

Know what you need. An energy audit is one of the best ways to determine the most cost-effective measures for reducing your energy bills and to help the environment. EnerGuide for Houses, developed by Natural Resources Canada, provides independent advice from licensed organizations. Call **1-855-525-9293** or visit **naturalresources.ca/energy** or talk to a local heating and cooling specialist or home improvement contractor.

Upgrade your heating source. About 44% of the energy needed to run an average home is used for space heating. If your heating system is more than 20 years old, check with your local dealer on upgrading your heating source to a new energy-efficient system. Financing is often available, and the savings on your heating bill will help offset the cost of the purchase. Energy-efficient units always make economical sense. Spend a little, save more. Install a programmable thermostat with a built-in timer. You can set it to lower the heat by a few degrees at night and when you're away, or turn off the AC when you leave for the day. For your own individual system, consult your heating and air conditioning specialist to determine whether there is a benefit to adjusting your dial.

Install insulation. It helps keep your house warm during the winter, but also cool during the summer. The type and amount of insulation you choose will directly affect energy costs. Contact your local dealer or home improvement contractor to find out the recommended insulation efficiency for your house design and climate.

Improve or replace windows. Single-pane windows are the most inefficient kind, but it is possible to increase their efficiency. Install storm windows to add insulating value and reduce air leaks. Ensure weather-stripping is located at all joints. As an alternative, use heavy-duty plastic film sealed tightly on a frame or plastic taped to the inside of the window frame. Replacing the old windows with new double-pane windows is the best alternative, if your budget will allow it.

Caulking and weather-stripping are relatively inexpensive and easy to apply, and can save you up to 15% on your heating bill.

Computer Myth Busted!

Many people think that turning off computers and monitors can harm the equipment, but this is far from the truth. Turning off computers will actually prolong their life and will save money.



Getting Territorial

HEALTHY LAND AND PROPERTY

What are good land management practices? Your everyday activities – inside and out – have an impact on your family’s health and the environment. You can use some simple management techniques to improve water quality and erosion control, while at the same time improve fishing and wildlife enjoyment opportunities.

Why should you be concerned? Two of the most important requirements for all living things are healthy habitats and clean water. Some land use and water management practices, once commonly accepted, are now known to cause serious harm. The quality of water on your property, and the animals living there, directly reflects your land and water management practices – good and poor. Some of these harmful practices include: filling, draining, or dredging wetlands; removing gravel bars or sediment from rivers and streams; clearing trees, brush, and other native plants from river banks, stream banks, and lakeshores; channeling rivers and streams; constructing break walls or retaining walls; grazing livestock along rivers and streams; maintaining a lawn or farming to the water’s edge. The province of Ontario has tax incentive programs for landowners who practice good land and forest conservation techniques. For more information on these programs, call your local Ministry of Natural Resources and Forestry office, or visit www.mnr.gov.on.ca.

Habitat is a combination of food, water, shelter and space arranged to meet the needs of wildlife. Even a small yard can be landscaped to attract birds, butterflies, beneficial insects, and small animals. Trees, shrubs, and other plants provide shelter and food for wildlife.



What can you do? Homeowners can take a number of simple and inexpensive steps to protect their property, pets and wildlife and at the same time have a healthy backyard. The fate of our water resources relies on wise use. Following the steps as outlined on the following pages will help to ensure that a clean-fishable stream, will be available to you and your family, a proud legacy that will stand for future generations.

As our homes progressively encroach on wildlife habitat, conflicts between wildlife and people are bound to increase. Animals are attracted to an area for two reasons: food and shelter. The first step in reducing conflicts is prevention – limiting access and removing attractions for unwanted animals. Remedies can be as simple as moving pet food inside, repairing holes in outside walls, or capping the unused chimney.



Take this quiz to assess potential health and environmental risks in your home!

PROPERTY PROTECTION

Yes | Sometimes | No | N/A

Do you...

- pest proof your house by capping the chimney, blocking holes, filling cracks and repairing loose siding to keep small animals and rodents out?..... Yes Sometimes No N/A
- secure garbage cans to deter animals? Yes Sometimes No N/A
- ensure dog or cat food is not left outside? Yes Sometimes No N/A
- make sure your dog or cat has current rabies and distemper shots? Yes Sometimes No N/A
- protect trees from wildlife with commercial tree wrap or wire mesh?..... Yes Sometimes No N/A
- fence off garden areas? Yes Sometimes No N/A
- sprinkle repellents such as hot sauce or garlic to make garden plants unpalatable to wildlife?..... Yes Sometimes No N/A

HABITAT PROTECTION

Yes | Sometimes | No | N/A

Do you...

- leash your dog and bell your cat to protect birds and small mammals? Yes Sometimes No N/A
- grow trees, shrubs and flowers that produce nuts, berries, fruits, seeds, and nectar for wildlife to feed on? Yes Sometimes No N/A
- provide water in a birdbath or a shallow dish, when water is not provided naturally? Yes Sometimes No N/A
- plant a mix of trees and shrubs for year-round protective cover from weather and predators? Yes Sometimes No N/A
- install your feeders near natural cover or place brush piles nearby so animals can quickly hide from predators? Yes Sometimes No N/A
- remind your children that wild animals may carry rabies and should never be approached? Yes Sometimes No N/A
- leave dead trees standing if not a safety hazard (these are homes for many creatures and when they decay, they improve the woodland soil)?..... Yes Sometimes No N/A
- contact your local Natural Resources office before removing a beaver dam? Yes Sometimes No N/A
- use non-lead sinkers and jigs for fishing and non-lead pellets for hunting? Yes Sometimes No N/A

Note: The *Fish and Wildlife Conservation Act* (Ontario) prohibits hunting, trapping or collecting of any wildlife without the proper license or permit. Contact your local Ministry of Natural Resources Office for information on obtaining one.

SHORELINE PROTECTION

Do you...

	Yes	Sometimes	No	N/A
- maintain native plantings along natural watercourses?.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- check regularly for invasive plants, such as purple loosestrife, and remove them carefully?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- report water quality problems (caused by construction, other residents, logging, farming, or industry) to local municipalities, Conservation Authorities or Ministry of Environment Office?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- resist disturbing, removing or filling parts of the riverbed in front of your property?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- let imported beach sand erode naturally and let native plants grow back?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- leave a minimum 5 metre (16 feet) buffer strip near water's edge?.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- use non-motorized watercrafts like canoes or paddle boats as much as possible?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- adjust the speed of your motor boats to reduce the wake near shorelines?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- maintain your boat motor and practice safe fuelling?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- use oil absorbing bilge cloths, instead of bilge cleaners?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- build a low impact dock (i.e. cantilevered, modest post dock or floating – instead of resting on bottom)?.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- understand that you cannot change the profile of the shoreline by removing natural material – rocks, fallen trees, vegetation – or by adding substantively to it* (you might be affecting wildlife habitat)?.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- replace lawn with native vegetation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- prevent sump pump or eavestroughs from discharging directly into streams or rivers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- keep trash, litter and grass clippings out of ditches, creeks and rivers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- prune trees to obtain a better view, rather than removing them?.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- recognize the need for bigger setbacks with steep shores or waterfront with shallow soils (keep algae and weed growth away from the shoreline)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- retrofit old failing retaining wall with a less perpendicular shoreline treatment (relaxing the slope allows nature to stabilize the shoreline. It also allows ducklings to access the shore, loons to nest, and water to be cleaner on entry from the shore)?.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* For further information, refer to the *Conservation Authorities Act*, Section 28 Regulations.

Well vegetated, natural shorelines serve as buffer strips, protecting banks from erosion, safeguarding water quality and providing critical habitat for many fish and wildlife species.



For a comprehensive guide to healthier waterfront living, "On the Living Edge" by Sarah Kipp and Clive Callaway, published through Conservation Ontario and The Rideau Valley Conservation Authority, is a valuable addition to any home library.

To find out how you rated and what it means, go to page 6.

Shorelines are sensitive areas with incalculable value. They need special care.



3 healthy ways to protect your shoreline:

- 1 Leave it natural.** Do not mow grass to the water's edge. Trees, shrubs, hardy perennial grasses, rushes and sedges stabilize shorelines with their root systems and protect the ground during heavy rains and wave action. They hold moisture and prevent wind and water erosion. Resist the urge to tidy up. Leave twigs, leaves, rock rubble and natural vegetation in appropriate areas. You will be creating wildlife homes!
- 2 Learn more about invasive plants, and avoid using them.** Some invasive plants already causing damage in Canada are purple loosestrife, glossy buckthorn, garlic mustard and norway maple. Check regularly for their presence and remove them carefully by replacing them with native, non-invasive plants. For more information on invasive species contact The Invasive Species Awareness Program at the Ontario Federation of Anglers and Hunters at www.ofah.org.
- 3 Take care when waterfront is used for recreation.** Minimize the disturbances caused by your presence when living, working and playing on the water. Respect wildlife and refrain from disturbing nests, lodges and dens. Small things can make a big difference to the health of waterways, shorelines and wildlife. When fishing, lead weights should be avoided. Their toxic properties can infect the environment, fish, water birds and humans. Shoreline erosion is also a concern. Boaters should try to keep their distance from the shoreline to minimize wave impact. If they must be close to shore, driving at a slower speed reduces the wake that is produced. When planning the construction of a dock, thought should be given to designs that lessen impact on the shoreline. Please note that if erosion is already a problem, be responsible and contact your local Conservation Authority for information to repair the problem, and make sure to get a permit before any work begins. Be aware of local municipal by-laws or restrictions on any shoreline disturbance or tree removal. Look for natural methods whenever possible. Also, ensuring that the bottom of a boat is thoroughly cleaned when traveling between bodies of water minimizes the risk of spreading invasive species.

Welcome wildlife to your backyard!

Create a backyard habitat. Even a small yard can be landscaped to attract birds, butterflies, beneficial insects, and small animals. Pollinators and birds who love to eat insects are especially beneficial to vegetable and flower gardens. Join the tens of thousands of property owners around the country who have put out the welcome mat for wildlife in their backyard!

Assess your yard or garden space. Assess your yard or garden space. Identify the habitat elements that already exist. You may already be providing a welcoming environment for wildlife! Make a list of all plants in your yard, topography, soil type(s), sun and shade areas so that you can plan what is needed and determine where best to locate your new plant arrivals. Leave forest areas intact for deep-woods birdlife and for use as carbon filters. Leave hedge rows as corridors and habitation for wildlife. Cut only the areas that you will be using and separate areas with a natural curved mowed edge.

Provide food and water for survival. Choose a mix of plants to provide food for backyard wildlife throughout the entire year. Use feeders as a supplement to natural food provided by native plants. If you're lucky enough to have a natural pond, stream or wetland on your property, make sure to preserve or restore it. These are excellent aquatic habitats. Water can also be supplied in a birdbath, a small pond, a recirculating waterfall or a shallow dish. When creating a wetland or a pond, make use of native plants.

Provide cover and a place to raise young. When choosing your plants, make sure to include at least one good clump of evergreen trees and shrubs to provide year-round protective cover from weather and predators. Good choices are cedars, juniper, hollies and live oaks, as they provide food as well as cover. Nest boxes can be used for bluebirds, chickadees, wrens, purple martins and many other species.

Leave those dead or dying trees alone! These are excellent habitat features. They are excavated and used by woodpeckers and a multitude of insects and cavity-nesting birds, such as owls, bluebirds, chickadees, and wrens.

The plants you use for food and ground cover will help determine the wildlife species attracted to your backyard. Nesting boxes, feeders, and watering sites can be added to improve the habitat. Install your feeders near natural cover or place brush piles nearby so birds can quickly hide from predators.



Give nature a helping hand.

Not tidying up everything can be a naturally beautiful idea. Tree suckers provide vital homes for moth and butterfly cocoons, while small brush piles provide an excellent habitat for butterflies, bees, moths and other pollinators.



Go to the Source

YOUR INFORMATION GUIDE

Agency	Information Provided	Website	Telephone / Email
Canada Mortgage and Housing	Healthy Housing and Renovations – Lead, Asbestos, Radon, Formaldehyde, etc. – CMHC'S Eco Improvement	www.cmhc-schl.gc.ca/ecoimprovement	1-800-668-2642 contactcentre@cmhc-schl.gc.ca
Composting Council of Canada	Composting and Compost Usage	www.compost.org	1-877-571-4769 info@compost
Conservation Authorities	Clean Water Initiatives, Permits, Grants and other Conservation Programs	www.conservationontario.ca	1-905-895-0716 info@conservationontario.ca
Eastern Ontario Health Unit	Well Water Testing (Water Testing Kits)	www.eohu.ca	1-800-267-7120 (Eastern Ontario)
Eastern Ontario Water Resources Committee	Water Source Protection, Well / Septic System Inspections, Grant Information for Upgrades and Decommissioning of Wells and Septic Systems.	www.nation.on.ca	1-877-984-2948 info@nation.on.ca
Environment and Climate Change Canada	Air Quality, Energy Efficiency, Climate Change, Recycling and Water Conservation	www.ec.gc.ca	1-800-668-6767 enviroinfo@ec.gc.ca
Government of Ontario	Ontario Statutes and Regulations	www.e-laws.gov.on.ca	1-800-668-9938 e-laws@ontario.ca
Green Communities Canada	Comprehensive Guide for the Private Well Owner. The Well Aware Booklet.	www.wellaware.ca	1-705-745-7479 info@wellaware.ca
Health Canada	Plastic Pollution Information Sheet It's Your Health Series of Articles and Fact Sheets – Family Health and Your Environment	www.hc-sc.gc.ca	1-866-225-0709
Municipal Waste Management	Blue / Black Box Recycling Programs, Household Hazardous Waste Programs, etc.	Link through your municipal website	Local Office
Natural Resources Canada – Office of Energy Efficiency	ENERGY STAR Products, EnerGuide Initiatives, and Greener Home Initiatives	www.oe.e.nrcan.gc.ca	1-855-525-9293 nrcanquestions-questionsnrcan@nrcan-rncan.gc.ca



Go to the Source

YOUR INFORMATION GUIDE

Agency	Information Provided	Website	Telephone / Email
Ontario Ground Water Association	Protecting Ground Water in Ontario	www.ogwa.ca	1-519-245-7194
Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)	Best Management Practices Series: Includes Well Water Safety, Soil Management, and Buffer Zones	www.omafra.gov.on.ca/agriculturalbestmanagementpractices	1-877-424-1300 ag.info.omafra@ontario.ca
Ontario Ministry of the Environment, Conservation and Parks (MECP)	Water Well Construction, Maintenance, Abandonment, Well Records, Ontario Directory of Licensed Water Well Contractors, Air Quality and Waste Management Information.	www.ontario.ca/page/well-records	1-800-565-4923 (info line) 1-888-396-9355 (well records)
Ontario Ministry of Municipal Affairs and Housing (MAH)	Ontario Building Code – Water and Sewage System Regulations	www.mah.gov.on.ca	1-800-267-9438 (Eastern Ontario)
Ontario Ministry of Natural Resources and Forestry	Watersheds, Water Resources, Fish and Wildlife Habitat	www.mnr.gov.on.ca	613-258-8204 (Kemptville) 1-800-667-1940 (Ontario)
Ontario Rural Wastewater Centre	Septic System Maintenance and Installation	www.ontarioruralwastewatercentre.ca	1-613-692-3571 (ext. 1123)
Ontario Soil and Crop Improvement Association	Environmental Farm Plan Gardening Tips and Land Stewardship Techniques	www.ontariosoilcrop.org	1-800-265-9751
Rideau Valley Conservation Authority	Septic Smart Understanding Your Home's Wastewater System	www.rvca.ca	613-629-3571 (ext. 1123)
Service Ontario	Health-related Issues	www.ontario.ca/serviceontario	1-866-532-3161



Keep It In Check

MAINTENANCE CHECKLISTS



Spring

- Test water for bacteria after spring thaw, usually April
- Test water for nitrate-nitrogen every three years (more often if there is a baby in the house)
- Check well cap and sanitary seal are secure and water tight
- Check that ground around well casing is mounded up
- Gather materials for first Household Hazardous Waste Depot of the season
- Turn compost pile after sitting all winter
- Prune trees to improve view rather than removing them
- Inspect all off-road vehicles (boats, all-terrain vehicles)
- Inspect all small engine equipment (lawn mower, weed trimmer, garden tiller)
- Spread organic fertilizer or compost on lawn
- Aerate soil
- Clean roof gutters – check downspouts are connected and drain away from foundation and sewage system
- Have an air conditioning contractor inspect and maintain your system as recommended by the manufacturer

Summer

- Have septic system pumped every 2-3 years
- Check ground around drainfield for soggy spongy soil
- Have effluent filter on septic tank cleaned
- Check for invasive plants along shorelines and ditches and remove immediately
- Test well water in August or four months after last test
- Clean air filters every 1-2 months during cooling season on air conditioner units
- Check and clean condensate drain holes and tubes on window air conditioner units

Fall and Winter

- Spread compost over flower and garden beds
- Pest-proof your house to ensure animals cannot get in
- Protect trees with wire mesh or tree wrap
- Check weather stripping on all doors and windows, and replace if old and worn
- Have a heating professional check your heating system every year
- Replace furnace filters every 1-2 months during heating season, allowing heating and cooling systems to operate properly
- Have wood-burning stove connector pipes and chimneys inspected and cleaned by a certified chimney sweep
- Check carbon monoxide and smoke detectors are in working order
- Gather materials for last Household Hazardous Waste Depot of the season
- Test well water in December or four months after last test

Notes:



The Healthy Home Guidebook

PROTECTING YOUR FAMILY AND ENVIRONMENT

***"The greatest danger to our planet
is the belief that
someone else will save it."***

~ Robert Swan,
Explorer and Environmentalist

