Frequently Asked Questions

Uniform Dwelling Code

Q. What is the UDC?
A. The UDC (Uniform Dwelling Code) is Wisconsin's residential building code.
Q. What is the purpose of the UDC?
A. The UDC is a uniform statewide code that sets minimum standards for:

- Fire Safety
- Structural Strength
- Energy Conservation
- Erosion Control
- HVAC Systems
- Plumbing Systems
- Electrical Systems
- General Safety and Health in Residential Dwellings.

Q. Who enforces the UDC?
A. The UDC is principally enforced by municipal or county building inspection departments and by state-contracted UDC Inspection Agencies. The Wisconsin Division of Safety and Buildings facilitates uniformity through code development, code interpretations, special investigations, inspector training, processing of petitions for variance, and monitoring manufactured dwellings firms.
The day to day enforcement of the UDC is primarily performed by municipal, county building inspectors, or privately employed inspectors who must be state-certified.
Q. What buildings are covered by the UDC?
A. The UDC covers new one- and two-family dwellings built since June 1, 1980 and their additions or alterations. This includes:

- Seasonal and Recreational Dwellings (Electrical, heating, or plumbing systems are not required, but if they are installed they shall comply with the applicable codes. If a home is heated , then it shall comply with the code's dwelling envelope standards. If the dwelling will be unheated or will utilize a renewable energy source insulation may be omitted. Local sanitary requirements may necessitate certain plumbing systems).
- One- and two-family condominium buildings.
- A single-family residence connected to a commercial occupancy.
- Community-based residential facilities with up to eight (8) residents.
- Manufactured , modular, or panelized dwellings regulated by the State of Wisconsin (but not mobile or manufactured homes regulated by the Federal Government).
- Additions to mobile or manufactured homes produced after June 1, 1980.
- A non-residential building, such as a barn, that is converted to a dwelling.

Q. What structures are not covered by the UDC?
A.

- Dwellings built before June 1, 1980 or additions and alterations to such dwellings.
- Mobile (manufactured) homes which are instead subject to Federal standards.
- Multi-unit (three or more) residential building which are regulated by the State Building Codes.
- Detached garages or accessory buildings.

Q. What about homes built before June 1, 1980?
A. The State does not have a construction or heating code for additions or alterations to older homes or any accessory structures or outbuildings. However, the State Plumbing, Electrical, and Smoke Detector codes DO apply to all dwellings, regardless of age. For the construction and heating standards for older homes, municipalities may adopt any or no code standard. Many use the UDC, while others use the Wisconsin Uniform Building Code, which is not a State code but rather a regional code in southeastern Wisconsin.

Home Inspections

Q. What is a home inspection?
A. A home inspection is an objective visual examination of the physical structure and systems of a home, from roof to foundation. A home inspection is the equivalent of a physical examination from your doctor. When problems or symptoms of problems are found, the inspector may recommend further evaluation or remedies.
Q. What does a home inspection include?
A. A standard home inspection summarizes findings from a visual inspection of the condition of the subject home's heating system, central air conditioning system (temperature permitting), interior plumbing and electrical systems; roof, attic, and visible insulation; walls, ceilings, floors, windows and doors; foundation, basement, and the visible structures of the home.
Q. Why do I need a home inspection?
A. A home inspection summarizes the condition of a property, points out the need for major repairs and identifies areas that may need attention in the near future. Buyers and sellers depend on an accurate home inspection to maximize their knowledge of the property in order to make intelligent decisions before executing an agreement for sale or purchase.
A home inspection points out the positive aspects of a home, as well as the maintenance that will be necessary to keep it in good shape. After an inspection, both parties have a much clearer understanding of the value and needs of the property.
For homeowners, an inspection may be used to identify problems in the making and to learn about preventive measures, which might avoid costly future repairs. If you are planning to sell your home, an inspection prior to placing your home on the market provides a better understanding of conditions which may be discovered by the buyer's inspector, and provides you an opportunity to make repairs that will make your home more desirable to potential buyers.
Q. What will it cost?
A. Inspection fees for a typical single family home vary by geography, size and features of the property, and age of the home. Additionally, services such as septic inspections and radon testing may be warranted depending upon the individual property. Prices vary. It is a good idea to check local prices in your area as you consider a professional home inspection. Do not let the cost deter you from having a home inspection or selecting an inspector you are comfortable with – knowledge gained from an inspection is well worth the time and expense. The lowest-priced inspector is not necessarily a bargain. The inspector's qualifications, including experience, training, and professional affiliations, should be the most important consideration in your selection.
Q. Can't I do it myself?
A. Even the most experienced homeowner lacks the knowledge and expertise of a professional home inspector. A professional home inspector has the experience, depth of knowledge and training to make an unbiased and informed report of the condition of a property. An inspector is familiar with the many elements of home construction, their proper installation and maintenance. An inspector understands how the home's systems and components are intended to function together, as well as how and why they fail and knows what to look for and is uniquely suited to interpret what their findings reveal about the condition of the property. Most buyers find it difficult to remain objective and unemotional about the house they really want, and this may affect their judgment. For the most accurate information about the condition of a home, always obtain an impartial third-party opinion by an expert in the field of home inspection.
Q. Can a house fail a home inspection?
A. No. A professional home inspection is an examination of the current condition of your home. It is not an appraisal, which determines market value, or a municipal inspection, which verifies compliance to local codes and standards. A home inspector will not pass or fail a house. A home inspection describes the physical condition of a property and indicates what may need repair or replacement.
Q. When do I call in the home inspector?
A. Before you sign the contract or purchase agreement, make your purchase obligation contingent upon the findings of a professional home inspection. This clause should specify the terms to which both the buyer and seller are obligated. Contact a home inspector immediately after the contract or purchase agreement has been signed. Home inspectors are aware of the time constraints involved in purchase agreements and most are available to conduct the required inspection within a few days.
Q. Do I have to be there?

A. While it is not necessary for you to be present, it is always recommended that you make time to join the inspector for their visit. This allows you to observe the inspector, ask questions as you learn about the condition of the home, how its systems work, and how to maintain them. After you have seen the property with the inspector, you will find the written report easier to understand.

Q. What if the report reveals problems?

A. No house is perfect. When the inspector identifies problems, it does not indicate you should not buy the house. His findings serve to educate you in advance of the purchase about the condition of the property. A seller may adjust the purchase price or contract terms if major problems are discovered during an inspection. If your budget is tight, or if you do not want to be involved in future repair work, this information will be extremely valuable.

Q. If the house proves to be in good condition, did I really need an inspection?

A. Yes. Now you can complete your home purchase with confidence about the condition of the property and all its equipment and systems. From the inspection, you will have learned many things about your new home, and will want to keep that information for future reference.

Radon

Q. What is radon?

A. Radon is a radioactive gas, which comes from the radioactive decay of radium, which is a fairly common, naturally-occurring mineral in the earth's crust. Radon goes through a fairly rapid radioactive decay period with a half-life of 3.82 days, and in about 28 days, all of it has decayed away leaving only its daughter products which ultimately decay away to lead 206, the familiar soft metal of a number of uses. The major risk of radon radiation is in the form of alpha radiation, which is also a form of ionizing radiation. Alpha radiation from radon is actually somewhat like two bullets, which are, released the instant that the radon atom disintegrates into its short-lived daughter products. These "bullets" are very powerful in a molecular world, and they contain a comparatively great deal of energy. When they strike a living cell, they can be disruptive both by creating chemical changes as well as genetic changes, which may be disruptive to the cell's growth. Usually, radon reaches an equilibrium concentration within a building wherein the amount of radon leaking into the building is the same as the rate that radon decays away and leaks out of the building. It will remain at that level for extended periods unless ventilation or leakage rates change, or unless the entry pathway is changed in some manner.

Q. How dangerous is radon?

A. Radon exposure over time at sufficient concentrations causes lung cancer, especially in smokers, and it is believed to be more dangerous to the very young. The last statistics that I have heard was that lung cancer is fatal in 95 percent of persons having it. Lung cancer progresses rapidly, and there is usually only about 6 months from the time of its occurring until death.

Q. Is radon visible to the human eye or can we smell it?

A. None of our five senses can detect the presence of radon. We can detect its presence only by way of tests, which look for and measure alpha or gamma radiation of a specific energy level. Do it yourself radon test kits are reasonably reliable, readily available and inexpensive. Testing protocol for the tests must be followed.

Q. Are there any symptoms for the inhabitants of a house suspected of having radon?

A. So far as I know, there are no symptoms, except that if one of the residents contracts lung cancer, it will be but a short period before it is apparent that the person is very seriously sick. And of course, then it is too late in almost every case.

Q. What do I need to do to get a radon inspection of my house?

A. Professional radon measurement folks are often listed in the telephone yellow pages. You also may contact your state radon office, which may provide you with a list of qualified testers.

Q. How effective are the "do it yourself" kits for radon measurement?

A. I believe that the kits are of uniformly good quality, and they will provide you with a reliable indication of the radon exposure, so long as the testing protocols are follow precisely. The greatest opportunity for error to be introduced is in the testing protocol, including the return of the device to the laboratory. Of course, the product must be listed by name within the EPA device list.

Q. If I want to get an outside vendor to do a radon inspection what are the criteria I should use in finding a reputable vendor?

A. A firm who performs both radon testing and radon mitigation is presented with tempting opportunities for fraud every day. I am also of the opinion that some of the most ethical folks I have met are engaged in both measurement and mitigation of radon. I encourage the use of do it yourself kits, and if there is question of the results or if the results are adverse, that you call the experts. Get two or more bids and compare them.

Q. Is there any EPA or other certification for radon inspectors?

A. In the past, such was the case. Currently voluntary certification is available from two voluntary agencies. Most states have mandatory certification programs. We suspect that some of the public are overly impressed by lots of credentials in some folk's efforts to dress up like they know something that others do not. Kind of like the biggest lawyer ad in the yellow pages. Folks who graduated from Harvard will never tell you that they did. They will tell you that they went to school in "the east."

Q. How can I know whether a particular town has a lot of radon in its homes?

A. It may not be easy. I suspect that the record-keeping of the state is frustrated by some measurement and mitigation guys' desire to keep their success quiet and private. However it is not important if a town has lots of radon or not. Radon can always be fixed. And the fixes are usually very reliable.

Q. Does radon effect all the rooms of a house?

A. Radon is likely more often found at higher concentrations in a basement or at ground level. My major radon concern is in bedrooms, children's play rooms and the rooms where invalids may be. Test those rooms for sure.

Q. At what level of radon reading in my house should I get concerned?

A. 4.0 Pico-Curies per Liter is the official EPA "action level." I have heard it suggested that such level is VERY ROUGHLY the equivalent of smoking seven cigarettes per day. You may seek a lower exposure.

Q. If I find I have radon in my home how do I get rid of it or is there no cure?

A. Radon cures are usually fairly quick and reliable. If your home has levels in the thousands! It may likely be reduced to less than 4.0 without great difficulty. Sometimes a radon reduction from 8 to less than 4 may be much more difficult.

Q. Should I get radon "check ups" for my home? Does the radon level vary?

A. If you have a home in which radon work has been done, I suggest an annual do it yourself test at New Year's. If your home has had modifications to the heating or air conditioning system, or if you have had renovation work done, I recommend that you radon test upon completion of such work. And, you bet, radon levels will vary by time of day, season, air temperature, precipitation, open or closed interior doors, wind, and more. Make sure you follow the testing protocols which are provided with the do it yourself kit, or that you maintain the conditions advised by your radon test professionals. If you find radon, have your home tested professionally and mitigated if necessary, to ensure that you have peace of mind as well as a good, healthy and safe home.

CAUTIONARY NOTE: We suspect that relative humidity increases that may occur in a hot, humid climate from a certain type of radon mitigation procedure may be much more dangerous to human health than radon. We suggest that maintaining an indoor relative humidity of ABOVE 50-55 percent during cooling periods should be avoided, especially for persons wit unusual irritability, allergies, asthma or other respiratory problems but also including rashes, burning eyes, blurring vision, headaches, and a number of other seemingly unconnected ailments. Visible mold or moldy odors are powerful clues to a potentially dangerous condition which may have originated in the unintentional or negligent creation of a mold and dust mite-favorable high humidity environment The presence of mold, dust mites and dust mite allergens can be confirmed by blood tests by the sufferer.

Q. How can I test for indoor humidity levels?

A. Testing for indoor relative humidity is the easiest of all. An inexpensive digital thermo-hygrometer will constantly monitor the onset of a risky high humidity condition for the cost of a battery once every three years. If indoor relative humidity can be maintained below 50 percent constantly, all dust mites will dehydrate and die within 12 days. They can then safely be vacuumed up with a HEPA vacuum. They will not return unless new specimens can absorb the moisture they need out of the air. Most molds do very poorly at 50 percent relative humidity unless dew point is reached or unless there are water leaks and moisture. Molds can thrive in wall cavities where they cannot be seen. If you see mold, it is likely that it is ten times greater in your home than you can see. The most important means to control mold and eliminate dust mites is to maintain relative humidity to 50 percent or less at all times, to avoid condensation problems,

and immediately to repair and to dry water leaks and all moist materials. Immediately means within 24 hours. Usually this means you should immediately call for professional help. Mold cleanup can be very expensive. Moisture and water extraction is relatively inexpensive.

Asbestos

Q. What is asbestos?
A.

- Asbestos is the name for a group of fibrous minerals that are mined and mixed into building materials.
- Asbestos is very resistant to heat and chemicals.
- Asbestos has been used in a wide range of manufactured goods including floor and ceiling tiles, coatings, texturing materials and thermal insulation.
- Currently, asbestos is used only in products where another material has not been found to replace it.
- Generally, asbestos is not a health risk when bound together with a substance that prevents the fibers from entering the environment.

Q. When is asbestos a hazard?
A. Asbestos is not always an immediate hazard. In fact, if asbestos can be maintained in good condition, it is recommended that it be left alone and periodic surveillance performed to monitor it's condition. Only when materials containing asbestos are disturbed or those materials become damaged that it becomes a hazard. When asbestos containing materials become damaged, the fibers separate and may then become airborne. Airborne fibers are a hazard to your health.
Q. How might someone be exposed?
A. By far, the most common form of exposure is by breathing in air containing asbestos fibers. Ingesting the fibers is also a health risk.
Q. What are the possible health risks of asbestos?
A.

- The body cannot breakdown or eliminate inhaled fibers.
- A slow buildup of scar-like tissue in the lungs (called asbestosis) can occur.
- Asbestosis has typically been observed in asbestos workers.
- Asbestos is known to cause cancer.
- There are no symptoms of exposure such as coughing, sneezing or itching and therefore you cannot tell if asbestos is in the air or if you have inhaled it.

Q. Can asbestos cause cancer?
A. Yes, Asbestos has been proven to cause cancer. Three types of cancer have been observed in individuals exposed to asbestos:
• Lung cancer - both small and large cell;
• Mesothelioma (a cancer of the lining of the chest and abdomen);
• Cancer of the gastrointestinal tract.

Drinking Water

Know Your Water Supply

Whether for drinking, cooking, bathing, or doing laundry, a supply of clean water is important to a healthy home. Know where your water comes from.

Tips for All Water Users

Install devices to prevent garden hose water from flowing backwards into your drinking water.
Consult your local building code office before making major repairs or changes to your plumbing system.
Conserve water because clean water is precious. Don’t waste it, instead, use water-saving toilets, and showerheads. Repair plumbing leaks right away.

Water Supply Problems

Bacteria & Viruses

The most common problem in private well water is bacteria. If bacteria are found, it means that human or animal wastes may be entering your water. Some bacteria can cause stomach upset or diarrhea.

Chemicals

Harmful chemicals such as gasoline, solvents, and pesticides can get into drinking water. Natural chemicals like arsenic, manganese, iron, and radon can also get into your drinking water.

Water Quality Testing

Public water supplies are tested for more than 100 chemicals. If you use public water you can call the water utility for information about your drinking water. All private wells and many public water supplies use groundwater. Groundwater is water held in underground soils and rock. Several communities use water from nearby lakes, like Lake Winnebago, Lake Michigan, and Lake Superior.

Tips for People who use Public Water Supplies

- Find out where your water comes from. Contact your water utility if you have questions about your water supply.
- Protect your water supply. Follow any water-use warnings. Dispose of pesticides, motor oil, and other chemicals properly.
- Reduce your use of lawn and garden chemicals since these chemicals may seep into drinking water.
- Call your water utility if you have questions or if you notice a change in the taste, odor, smell or color of your water. If you own a private well, be sure your water supply is safe. Yearly testing and maintenance will help protect your water supply. Call your local Department of Natural Resources (DNR) office for more information.

Tips for People who use Private Wells

- Find out the age and depth of your well and the length of its casing (the pipe inside the drilled hole). Learn about the types of soil, bedrock and water supply problems in your area.
- Find out when your drinking water was last tested. Know what tests were run, and the results. Keep records of any tests or repairs that you make.
- Test at least once a year for bacteria. Several labs in Wisconsin can do these tests. Check the yellow pages in your phone book for a lab near you.
- Test for nitrate. This is especially important if there is a pregnant woman or infant in your home. Nitrates come from fertilizer use, barnyard runoff, and septic systems. A high nitrate level may mean that your water also has bacteria or farm chemicals.
- You may want to do other tests. Talk to a regional water supply expert at your local DNR office to find out if arsenic or radon are common in your area. If your well is near an old landfill, gas station, or buried fuel tank you might want to test for volatile organic chemicals (VOCs). If your well is near an orchard or farm field, a test for pesticides might be advised.
- Have your water tested if you notice a change in its taste, odor, or color. Some tests are expensive and may be hard to do. Contact your well driller, local DNR office, or your local health department for help. If your water contains bacteria or chemicals find out the source of the problem. Fix it and test the water again to be sure it is safe.
- Keep chemicals, septic tanks, and animal waste away from your well. Dispose of chemicals and motor oil properly. Don't put waste chemicals in your septic system. Limit your use of lawn and garden chemicals. Keep the area around your well clean.

MOLD

Q. I heard about toxic molds that grow in homes and other buildings. Should I be concerned about a serious health risk to my family and me?

A. The hazards presented by molds that may contain my-co-toxins should be considered the same as other common molds, which can grow in your house. There is always a little mold everywhere - in the air and on many surfaces. There are very few case reports that toxic molds (those containing certain my-co-toxins) inside homes can cause unique or rare, health conditions such as pulmonary hemorrhage or memory loss.

These case reports are rare, and a causal link between the presence of the toxic mold and these conditions has not been proven. A common-sense approach should be used for any mold contamination existing inside buildings and homes. The common health concerns from molds include hay - fever like allergic symptoms. Certain individuals with chronic respiratory disease (chronic obstructive pulmonary disorder, asthma) may experience difficulty breathing. Individuals with immune suppression may be at increased risk for infection from molds. If you or your family members have these conditions, a qualified medical clinician should be consulted for diagnosis and treatment. For the most part, one should take routine measures to prevent mold growth in the home.

Q. How common is mold, including Stachybotrys chart arum (also known by its synonym Stachybotrys atra) in buildings?

A. Molds are very common in buildings and homes and will grow anywhere indoors where there is moisture. The most common indoor molds are Cladosporium, Penicillium, Aspergillus, and Alternaria. We do not have accurate information about how often Stachybotrys chart arum is found in buildings and homes. While it is less common than other mold species it is not rare.

Q. How do molds get in the indoor environment and how do they grow?

A. Molds naturally grow in the indoor environment. Mold spores may also enter your house through open doorways, windows, heating, ventilation, and air conditioning systems. Spores in the air outside also attach themselves to people and animals, making clothing, shoes, bags, and pet's convenient vehicles for carrying mold indoors. When mold spores drop on places where there is excessive moisture, such as where leakage may have occurred in roofs, pipes, walls, plant pots, or where there has been flooding, they will grow. Many building materials provide suitable nutrients that encourage mold to grow. Wet cellulose materials, including paper and paper products, cardboard, ceiling tiles, wood, and wood products, are particularly conducive for the growth of some molds. Other materials such as dust, paints, wallpaper, insulation materials, drywall, carpet, fabric, and upholstery, commonly support mold growth.

Q. What is Stachybotrys chartarum (stachybotrys atra)?

A. Stachybotrys chart arum (also known by its synonym Stachybotrys atra) is a greenish-black mold. It can grow on material with a high cellulose and low nitrogen content, such as fiberboard, gypsum board, paper, dust, and lint. Growth occurs when there is moisture from water damage, excessive humidity, water leaks, condensation, water infiltration, or flooding. Constant moisture is required for its growth. It is not necessary, however, to determine what type of mold you may have. All molds should be treated the same with respect to potential health risks and removal.

Q. Are there any circumstances where people should vacate a home or other building because of mold?

A. These decisions have to be made individually. If you believe you are ill because of exposure to mold in a building, you should consult your physician to determine the appropriate action to take.

Q. Who are the people who are most at risk for health problems associated with exposure to mold?

A. People with allergies may be more sensitive to molds. People with immune suppression or underlying lung disease are more susceptible to fungal infections.

Q. How do you know if you have a mold problem?

A. Large mold infestations can usually be seen or smelled.

Q. Does Stachybotrys chart arum (Stachybotrys atra) cause acute idiopathic pulmonary hemorrhage among infants?

A. To date, a possible association between acute idiopathic pulmonary hemorrhage among infants and Stachybotrys chart arum (Stachybotrys atra) has not been proved. Further studies are needed to determine what causes acute idiopathic hemorrhage.

Q. What if my child has acute idiopathic pulmonary hemorrhage?

A. Parents should ensure that their children get proper medical treatment.

Q. What are the potential health effects of mold in buildings and homes?

A. Mold exposure does not always present a health problem indoors. However some people are sensitive to molds. These people may experience symptoms such as nasal stuffiness, eye irritation, or wheezing when exposed to molds. Some people may have more severe reactions to molds. Severe reactions may occur among workers exposed to large amounts of molds in occupational settings, such as farmers working around moldy hay. Severe reactions may include fever and shortness of breath. People with chronic illnesses, such as obstructive lung disease, may develop mold infections in their lungs.

Q. How do you get the molds out of buildings, including homes, schools, and places of employment?

A. In most cases mold can be removed by a thorough cleaning with bleach and water. If you have an extensive amount of mold and you do not think you can manage the cleanup on your own, you may want to contact a professional who has experience in cleaning mold in buildings and homes.

Q. What should people to do if they determine they have Stachybotrys chart arum (Stachybotrys atra) in their buildings or homes?

A. Mold growing in homes and buildings, whether it is Stachybotrys chart arum (Stachybotrys atra) or other molds, indicates that there is a problem with water or moisture. This is the first problem that needs to be addressed. Mold can be cleaned off surfaces with a weak bleach solution. Mold under carpets typically requires that the carpets be removed. Once mold starts to grow in insulation or wallboard the only way to deal with the problem is by removal and replacement. We do not believe that one needs to take any different precautions with Stachybotrys chart arum (Stachybotrys atra), than with other molds. In areas where flooding has occurred, prompt cleaning of walls and other flood-damaged items with water mixed with chlorine bleach, diluted 10 parts water to 1 part bleach, is necessary to prevent mold growth. Never mix bleach with ammonia. Moldy items should be discarded.

Q. How do you keep mold out of buildings and homes?

A. As part of routine building maintenance, buildings should be inspected for evidence of water damage and visible mold. The conditions causing mold (such as water leaks, condensation, infiltration, or flooding) should be corrected to prevent mold from growing.

Specific Recommendations:

- Keep humidity level in house below 50%.
- Use air conditioner or a dehumidifier during humid months.
- Be sure home has adequate ventilation, including exhaust fans in kitchen and bathrooms (make sure the vent directly to the exterior.)
- Use mold inhibitors, which can be added to paints.
- Clean bathroom with mold killing products.
- Do not carpet bathrooms.
- Remove and replace flooded carpets.

Summary: Stachybotrys chart arum (Stachybotrys atra) and other molds may cause health symptoms that are nonspecific. At present there is no test that proves an association between Stachybotrys chartarum (Stachybotrys atra) and particular health symptoms. Individuals with persistent symptoms should see their physician. However, if Stachybotrys chartarum (stachybotrys atra) or other molds are found in a building, prudent practice recommends that they be removed. Use the simplest and most expedient method that properly and safely removes mold.

LEAD

Lead is a toxic heavy metal that is released into the environment through industrial sources, the previous use of leaded gasoline (now banned), disposal of lead wastes and the peeling or flaking of lead-based paint. Individuals are exposed every day to varying amounts of lead in our diets, water, air and soil. House dust may contain lead originating from contaminated soil or from lead-based paint.

Q. How are children affected by lead?

A. The fetus, infants and young children are most at risk from lead exposure. High levels of lead in children may result in reduced hearing, muscle coordination and intellectual development. Lead contamination may also contribute either to lethargy or to aggressive behavior. If you have concerns and would like more information, contact your local health unit or your medical doctor.

Q. How much lead is there in our soil?

A. The natural background level of lead in soil is less than 100 parts per million (ppm). Lead in surface soil in residential communities is commonly higher than 200 ppm. In older, urban residential areas lead in soil on some properties may range from 500 to 1000 ppm, even when there is no local industrial source. Where historically there have been commercial or industrial operations mixed with residential housing, lead levels around homes may be higher.

Q. Is lead in soil harmful?

A. Children take in an average of 80 milligrams of soil and dust (equal to the size of a grain of rice) each day while they play. Depending on the concentration of lead in the soil, they may develop elevated levels of lead in their blood. In addition, lead-contaminated soil contributes to the lead found in dust in the home. Lead-based paints and industrial pollution can also contribute to lead dust in the home. Soil and dust are considered a major route of exposure for children. Many reputable sources have advised that there is minimal risk from exposure to soil with lead levels below 200 ppm. However, when soil lead levels are greater than 1000 ppm on your property or greater than 400 ppm in bare soil areas of a child's play area, the health department strongly advises that you take measures to reduce or minimize your child's exposure. Various ways to do this are described below. If you are selling or renting your home or other real estate and lead is present, you may have an obligation to disclose the presence of lead to potential purchasers and others.

Q. What can I do to reduce exposure to lead?

A. There are ways of reducing or minimizing lead exposure, particularly for young children: Keep your children away from soil contaminated with lead. Contaminated soil can be removed, or exposure can be reduced by covering the soil with clean soil or sod. Soil can also be paved over or covered with paving stones or decking. Wash children's hands and faces after they have been playing outdoors and before eating. Don't let your children eat paint chips. They like them because the lead in the paint makes the chips taste sweet. Clean your home regularly using a damp mop or cloth. Vacuuming and sweeping can increase dust levels in the home. Use rugs, curtains and slipcovers that can be cleaned easily. Have forced air ducts cleaned by professionals and replace or clean furnace filters often. Avoid bringing outdoor dirt inside by removing outdoor shoes. Brush pets often as their fur collects dust. Pets should be brushed outside if possible. Locate your vegetable garden at least three to four feet away from roads, driveways and downspouts. Also make sure your garden is at least a metre away from sources of flaking paint such as walls, sheds and fences. Gardeners should consider bringing in clean soil for growing vegetables. Before eating, wash all vegetables thoroughly and peel root crops.

Q. Can I eat vegetables from the garden?

A. Lead enters and is stored in vegetables grown in lead-contaminated garden soils. The amount of lead taken up and stored in these vegetables will vary depending on the type of vegetable, the type of soil, your gardening practices and the amount of lead in the soil. Although lead normally increases in plants as they age, it is taken up and stored differently in roots and in plant leaves. For example, lettuce leaves can store seven times more lead than the roots of carrots. Beet leaves contain more lead than beet roots. Therefore, it is not always safe to assume that root vegetables will contain more lead than leafy vegetables. Fruit crops such as tomatoes, berries, apples and cucumbers, present a much lower risk because they take up and store very little lead. There is minimal risk in consuming home- grown vegetables grown in soil containing less than 200 ppm of lead. However, this is only a guide and it should be remembered that eating vegetables grown in soil contaminated with lead will always increase your exposure to lead and the risk to your health, especially for infants and young children if they are used in baby food recipes. You should not eat any vegetables out of your garden if lead levels are above 1000 ppm.

Q. How can I get more information?

A. If you live in the vicinity of a source of lead pollution and you suspect your soil may be contaminated, contact your local Health Department office for information. The number is listed in the yellow pages section of the telephone directory. Contact your local health unit or your medical doctor if you are concerned about being exposed to lead or have questions about health effects.