



Professional Practices

Lesson 21

Environmental Hazards

An Overview of Potential Impacts of Environmental Hazards on the Practice of Real Estate Sales

45 Hour Louisiana Post-Licensing

Environmental Hazards

Introduction

Section 41 of the Louisiana Mandatory Property Condition Disclosure Form requires sellers to disclose to potential buyers the presence of asbestos, formaldehyde, radon gas, chemical storage tanks, contaminated soil, contaminated water, toxic mold, mold/mildew, pets, electromagnetic fields, crystal meth disclosure, other adverse materials or conditions and contaminated drywall/sheetrock. It is reproduced below.

Louisiana Mandatory Property Condition Disclosure Form

(41) Does the property or any of its structures contain any of the following? (Check all that apply and provide the nature and frequency at the end of this section.)

Asbestos	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NK	Formaldehyde	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NK
Radon gas	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NK	Chemical storage tanks	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NK
Contaminated soil	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NK	Contaminated water	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NK
Hazardous waste	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NK	Toxic Mold	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NK
Mold/Mildew	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NK	Pets	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NK
Electromagnetic fields	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NK	Crystal meth exposure	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NK
Other adverse materials or conditions	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NK	Contaminated drywall/sheetrock	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NK
Question Number	Explanation of "Yes" answers			<input type="checkbox"/> Additional sheet is attached			

The addition of this portion of the property disclosure form is an indication of the importance of disclosing the presence of the listed environmental hazards.

Environmental hazards are ubiquitous; they are present in every square inch of the planet and are not limited to Louisiana. Because this course is intended for Louisiana's real estate licensees, in this course we will discuss only those environmental hazards found in Louisiana.

There are a number of environmental hazards that are prevalent only in specific parts of the state or only in specific types of property. Others are as likely to occur in Monroe as they are in Chalmette or any other location in the state.

Licensees are neither required nor expected to have technical knowledge of environmental hazards. They are expected to require sellers to complete the mandatory Property Condition Disclosure form and to recognize environmental hazards and to be the source of authoritative information for their customers and clients.

Air Contaminants

Formaldehyde

Best known for its role in embalming and tissue preservation, formaldehyde is present in low levels in all homes. Formaldehyde is an effective preservative because it quickly kills bacteria or fungi that might otherwise begin the process of decomposition.

While a high concentration of formaldehyde is toxic and can cause cancer, low levels in interior air cause allergic reactions to many persons. Formaldehyde resins are used to make textiles crease-resistant and can be found in everything from curtains to sheets and clothing. These resins are also used in dishwashing liquids, fabric softeners, carpet cleaners, glues, cardboard and paper products (including wallpaper) and certain latex paints. They are also used in products intended to be used on the body, such as cosmetics (including nail polish and nail hardener) and paper products (facial tissues, napkins and paper towels).

Formaldehyde is also an ingredient in a wide variety of resins used to make permanent adhesives for plywood and carpeting, causing it to be present in furniture and building materials (particularly those made with pressed wood products) and certain molded plastics. These products release small quantities of formaldehyde into inside and outside air, as do certain insulating foams that are no longer in use in new home construction but that may be present in older homes.

When released into air inside a building, allergic persons respond with a variety of symptoms from burning, itchy eyes to nausea and vomiting. When there are large amounts of formaldehyde released into the interior air, or if an individual is very sensitive, serious illness can result.

Burning of most materials also releases formaldehyde, so fireplaces, wood stoves and smoking can also be a source of indoor formaldehyde. Adding plywood or other materials of which formaldehyde is a part releases a sufficient quantity of formaldehyde into interior to cause symptoms in most persons.

It is possible to minimize the effects of formaldehyde within buildings by using ventilation, sometimes with fans to aid the process and sealing the materials with a protective coat (where possible). It is probably impossible to eliminate formaldehyde and its ill effects, but very simple (in many cases) to minimize its intrusion into buildings.

Radon Gas

Radon gas is present beneath the soil the entire planet. It is a significant danger to humans when it rises from beneath the soil and enters the inside air of buildings. Whether or not radon gas will rise to the surface and cause health problems depends on the composition of the soil. Sandy soil allows radon gas to rise; heavy, clay soil does not.

The soil in Louisiana is, for the most part, of the heavy clay variety through which radon gas does not percolate. Persons who fear the intrusion of radon gas into their buildings may purchase radon detection kits. They are widely available from a number of sources online and are relatively inexpensive.

Other Air and Soil Contaminants

We will not closely examine the issue of air or soil contaminants. That is not because they are not present, but because the specific contaminants are subject to change at any time. We will instead strongly advise licensees to become very familiar with any sources of air and soil contaminants in their market areas and to be aware that they may change at any time.

Airborne and soil contaminants may be released by industry, agriculture, military or mining (including drilling for oil) sources. The directions they take once released into the air are dependent on air currents. It is not possible for real estate licensees to prevent these releases nor can they order cleanups. All that real estate licensees can do is to be aware of the possibility of such releases and, when appropriate, warn potential buyers of the potential for contaminants.

Superfund/Hazardous Waste and Cleanup Sites

Superfund

There are numerous federal and state laws that address the problem of environmental protection. The Environmental Protection Agency (EPA) to work with other agency was created in 1970 to oversee and implement the bewildering number of laws designed to protect the environment. It is mentioned in this course for the simple purpose of preparing licensees to answer any questions customers and clients may ask regarding the Superfund.

Perhaps the most famous of the environmental protection laws is the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). It was created in 1980 and established a fund of \$9 billion (known as the Superfund) to be used to clean up uncontrolled hazardous waste sites and respond to spills of hazardous materials when responsible parties cannot be found.

Although \$9 billion seemed, in 1980, to be an amount equal to any environmental challenge, in fact it is woefully insufficient. The inadequacy of the Superfund has led to prolonged and acrimonious court and media battles as the EPA seeks to force parties they label as responsible and the parties try just as energetically to deny responsibility.

Of major importance to real estate licensees is the provision under CERCLA that landowners are liable when a release or the threat of a release of hazardous materials has occurred on their property. In these events, the property owner can be held responsible for the cleanup, even when the contamination is the result of the actions of other parties.

This liability extends beyond the boundaries of the landowner's property to include any contamination of neighboring properties. A landowner who has innocently purchased a property that is the source of the contamination may seek reimbursement from previous owners, but the cleanup is the responsibility of the owner at the time the contamination is discovered.

Such cleanups can cost great amounts and have been known to financially ruin property owners who purchased property with no knowledge of the contamination. It is not difficult to imagine the feelings of these "innocent" owners toward the real estate licensees who sold them the property without first investigating for the presence of hazardous waste contamination.

In Louisiana there is a great deal of industrial activity, oil production and relatively large agricultural production. These industries provide needed jobs for the population and are the source of much of the tax base that keeps the state's services running. Hazardous wastes also are often the companions of these industries.

Some licensees are of the mistaken belief that the cleanup of any hazardous wastes on properties will be financed by the Superfund. Although it may be true that some of the costs will eventually be reimbursed to the party who paid for the cleanup, the time element makes depending on Superfund almost totally impractical, particularly in the timeline of the typical residential or small commercial or industrial property.

Illegal dumping affects Mahoning, rivers leading to Gulf of Mexico (Posted by [Rachel Lundberg](#) in [Audio](#), [Community](#), [Fracking](#), [WYSU](#))

Things had been looking up for Youngstown, Ohio's long-polluted Mahoning River until last week. That's when an Ohio company intentionally dumped up to 60,000 gallons of fracking waste into one of its tributaries.

Rachel Lundberg brings us the story of one man, his river and the community fighting for revival. Lauren Schroeder visited the Mahoning River about a mile downstream from where crude oil and brine from an illegal dump would flow into the waterway. (Mary Sweetwood/TheNewsOutlet.org) Lauren Schroeder, a retired biology professor, is in his 45th year of studying and trying to clean up the Mahoning River.

The water quality today in the Mahoning River is much improved.

The Mahoning snakes through the Rust Belt city of Youngstown, Ohio.

For almost 100 years, Youngstown's former steel companies would dump waste into the Mahoning River. The steel giants caused so much damage that there's still a ban on swimming, wading, fishing, any contact with about 30 miles of the river.

The river was once the most polluted streams in the entire United States. Sometimes the temperature in the river often exceeded 100 degrees Fahrenheit.

Industry again threatens the river. But this time, instead of steel companies, it's gas drillers. The communities surrounding Youngstown are rich with gas and oil reserves and the industry is making itself at home.

This is a bad omen that people will dump their waste to avoid paying the costs of proper disposal.

Dan Mamula, manager of the Mahoning River Corridor Initiative, says he wants the industry well monitored and held accountable.

Right off the get-go. It has to be known that we will not tolerate shoddy business practices. Schroeder thought the days of dumping were over.

One incident of the spill itself will not have very much impact on the river, but if they occurred frequently that would have a degrading effect.

And these waters won't be the only ones threatened. Dumping into the Mahoning means pollution is carried to the Beaver, the Ohio and the Mississippi rivers and eventually to the Gulf of Mexico.

Anybody living along there would be impacted by what we dump in the river in Ohio.

This is just another set back in Youngstown's struggle to bounce back from the steel crisis of the 1970s. State officials continue to investigate the incident.

It's a tragedy and very disheartening.

Caitlin Cook contributed to this story. Reporting for TheNewsOutlet.org, I'm Rachel Lundberg.

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Hazardous (Toxic) Waste Disposal Sites

Landfills



Hazardous waste disposal sites are located throughout Louisiana. The nature of the hazardous wastes varies from medical to radioactive wastes, and disposal of them also varies. The most widely known type of disposal sites is what is called landfills.

A landfill is basically a hole, usually very large, that is lined with either clay or a synthetic liner to prevent leakage of waste material into the water supply. A system of underground drainage pipes is installed to monitor leakage and leaching.

This feature of landfills is noteworthy in Louisiana for two reasons: the water table is generally very high, and, water is abundant in the soil. Abundant water in the soil encourages leaching, so leaks and leaching are of greater danger in our state than they would be in states with drier soil conditions.

Once the landfill hole has been dug and lined with leak-prevention materials, the waste is laid on the bottom and a layer of topsoil is then compacted onto the waste. This layering is repeated until the landfill is full and then some, with layers often a hundred feet or more above ground level.

When full, the landfill is then "capped." A cap of two to four feet of soil is laid over the top of the landfill and grass is planted to improve its appearance. Landfills are not suitable for building on because of the instability of the soil, but are often used as parks and other recreation areas, such as golf courses. There are 76 landfills in Louisiana, most of which are almost certainly used for the disposal of household garbage (this supposition is supported by data showing the majority are located in or near the most populated, therefore, greatest household garbage generating areas of the state). Although landfills are no longer in common use in Louisiana for disposal of toxic waste, there are probably a number of older landfills in which industrial toxic wastes are buried.

Dump Sites

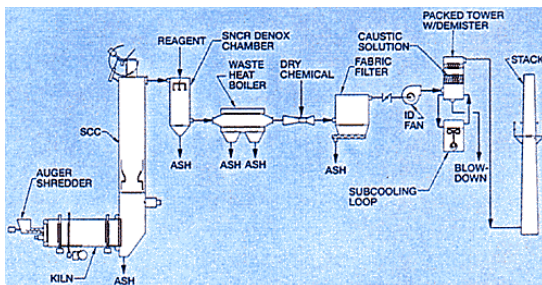


Even earlier, it was not unusual for wastes (toxic or otherwise) to simply be dumped into convenient holes in the ground or bodies of water. Household water drawn from areas near these older dump sites or older landfills may be contaminated by toxic materials. This is one of the reasons that water in public and private water production plants is constantly tested, and that well water must be tested in residential properties that have on-site wells for household water.

Many dump sites are illegal, undocumented or both. Many dump sites intended for household garbage are being contaminated by dumping batteries, paint or defunct electronic gadgets along with banana peels and chicken bones.

The locations of many dump sites have been lost to history. This is not a problem in the case of chemicals that can relatively easily be broken down and returned harmlessly to the earth. Other chemicals such as mercury, toluene and benzene will remain harmful for longer periods of time, for all practical purposes forever, unless steps are taken to remove and destroy them.

Incinerators



Incinerators are often used to dispose of toxic waste in Louisiana as well as in most other states. Compared to landfills, incinerators are more efficient, more effective and much easier for state authorities to access and inspect.

Incinerators must be permitted by the state and the permit process is involved, highly technical and requires that operators be educated in incinerator manufacture, installation and operation. Through the incineration process, any wastes that can be burned away are and the escaping gases are either captured (if harmful) or released into the atmosphere where they combine with atmospheric gases to become harmless. Captured harmful gases are further treated or sent to deep earth storage facilities.

Real Estate Implications

Incinerators are considered the safest of the types of toxic waste generators in use in Louisiana, but no method is one hundred percent fool proof. It is therefore advised that any licensee who sells property in the vicinity of known hazardous waste treatment or destruction facilities become very aware of water and air quality.

FYI, brownfields are defunct, derelict or abandoned commercial or industrial sites, many of whom are suspected of containing toxic wastes.

QUESTION:

A real estate licensee has found the perfect listing: a secluded four acres easily accessible to schools, churches and shopping with trees and in the back yard, a pond. There are ducks floating on the pond and, when the sun is at just the right angle, the water has a beautiful iridescent sheen to it. The owners are very motivated to sell and move out of state. They have indicated that they will take much less than the fair market value the licensee suggested. Within this scenario, which are the red flags that might indicate toxic waste intrusion onto this property?

- a. Four secluded acres, ducks
- b. Iridescent water and motivated sellers
- c. Sellers willing to take less and moving out of state
- d. Both b and c

ANSWER:

The answer is d. An iridescent sheen on still water often indicates intrusion of petrochemicals; sellers willing to take less is always a red flag of something; sellers anxious to move out of state may be trying to avoid being sued by future owners.

Asbestos



Asbestos is a naturally occurring material that was once widely used in building materials because it is fire-resistant and has some insulating properties. It was a component of thousands of building materials found that were used in construction of residential structures. Because it is also relatively inexpensive, asbestos insulation, siding and roofing were very popular for residences and public buildings such as schools.

Asbestos is a highly friable material. This means that as it ages its fibers very easily break down into tiny filaments can appear to be dust and that are easily breathed into the lungs. The result is serious and deadly lung diseases that can take decades after the material is inhaled to appear.

Illnesses and ultimately deaths of workers in manufacturing processes using asbestos drew attention to the dangers of breathing in asbestos fibers. The lung diseases associated with inhalation of asbestos are particularly debilitating and result in very difficult illnesses and deaths.

There are four main diseases associated with inhalation of asbestos fibers: mesothelioma, a form of cancer affecting the lung linings; other asbestos related lung cancer; asbestosis, a non-malignant scarring of the lungs and non-malignant pleural disease (a diffused thickening of pleural tissues and pleural plaques).

In 1978 use of asbestos-containing materials (ACMs) was banned for all construction. There are still numerous properties, many of them residential, with asbestos siding and insulation. In Louisiana the humid climate has destroyed many of the roofs held together with asbestos fibers.

When an asbestos-containing roof or siding or insulation has to be removed from a commercial or government building, it must be removed using strict guidelines for removal and destruction of ACMs. The act of removal releases asbestos filaments into the air (filaments are also released in the course of normal wear and tear, just in smaller amounts and over a longer period of time). The removal process requires state-licensed technicians and specially sealed environments. Improper removal procedures will increase the contamination of air within a structure, thus increasing the danger to residents.

An alternative process is known as **encapsulation**. In the encapsulation process the disintegrating asbestos is sealed off using special sealing materials so that broken filaments cannot escape. In certain circumstances, encapsulation may be preferable to removal, but the property owner must periodically monitor the encapsulated asbestos to be certain that there are no escaping filaments. An effective encapsulation almost always requires professional asbestos remediation.

QUESTION:

During the listing process, sellers indicate on the property condition disclosure form that their house does have asbestos siding. The siding is in excellent shape, and they ask their designated listing agent if it would be acceptable to paint a fresh coat over the siding rather than hire a pricy professional to remove it. The designated listing agent agrees that a new coat of paint will eventually be made but that first

- a. A special sealer must be applied
- b. A painter with special protective clothing must be hired
- c. An inspection should be made
- d. All of the above

ANSWER:

The correct answer is d. There are special sealing materials available that are specific to the job (siding, roofing, pipes, etc.). These materials are widely available. When the job is being done, the workmen should wear protective suits that include canister masks. Inspections should be made before and after the job is done.

Lead

Lead hazard is most commonly thought only to be from lead based paint. However, in older buildings there may remain lead water pipes that can cause water contamination from lead. It is wise to be aware of the danger from lead water pipes, but licensees will much more often encounter lead paint in older buildings in Louisiana. Lead paint is also found on older, painted furniture and some antique toys. This is good information to know, but not of particular concern in the business of listing and selling real estate.

Young children who are more likely to be playing near painted baseboards or window casings and stools are in most danger from the dust residue left when lead-based paint disintegrates as a result of age or when it is removed. Children tend to disregard the need to wash their hands after playing on floors or at windows, etc. and thus carry lead dust into their mouths with food or on toys touched by their hands and later placed in their mouths.

Lead from paint or other sources can result in damage to the brain, nervous system, kidneys and blood. The results range from mental retardation to death.

Lead was used as a pigment and drying agent or fixative in alkyd oil-based paint. Use of this type of paint was forbidden in a 1978 law. There was no provision in this law to remove existing lead-based paint, nor would it have been practical to have such a provision. Instead, the law provided that no paint be manufactured using lead.

Real estate licensees should be aware that when listing or selling properties built prior to 1978, it is highly likely that there is either some lead-based paint or some dust from the removal of lead based paint remaining within the structure. Anyone who has ever spent time at a sandy beach knows that sand tends to get everywhere and is often found hiding in very unexpected places. The reason that sand hides so well is that it has very fine texture and is carried by even the smallest whiff of air into crevices and cracks. Paint dust is lighter than sand, and therefore is even more easily carried into even smaller and harder to clean spaces.

In 1996 the EPA and the Department of Housing and Urban Development (HUD) issued the final regulation on lead based paint. The regulation requires the disclosure of the presence of any known lead-based paint hazard to potential buyers or renters. There is no requirement in the federal law for testing for the presence of lead-based paint. Paint inspections are possible that identify the lead content of every different painted surface in a building.

Licensees must provide buyers and renters with the HUD pamphlet, "Protect Your Family from Lead in Your Home." Licensees must also disclose to renters or buyers any prior test results or knowledge of any lead paint products within a building. Only buyers' agents who are paid entirely by the buyer are exempt under the federal law. It is recommended that buyers' agents who are paid entirely by the buyers will make the same disclosures required of all other licensees.

QUESTION:

A licensee is showing properties to a buyer who specifically requested not to be shown any residences where there is a likelihood of lead paint danger. The licensee is most likely to avoid this problem by showing houses built after

- a. 1968
- b. 1978
- c. 1988
- d. 2008

ANSWER:

The answer is b. Federal law banned the use of lead based paint in houses built after 1978.

QUESTION:

A lead test kit purchased from

- a. HUD
- b. EPA
- c. Paint store
- d. Kit manufacturer

ANSWER:

The answer is c. Lead test kits for testing paint for the presence of lead can be purchased from most stores that sell paint.

Mold

Mold spores are everywhere and require only a food source and moisture to grow and thrive. The food source can be pretty much anything organic and the moisture level found in humid air is sufficient. If you have seen mold growing on inorganic materials such as PVC pipe, the food source is not the pipe but any stray organic material that has deposited on it. Nearly invisible specks of dust can support mold life so long as there is a moisture source.

Mold and Climate

In Louisiana, this means that there is significant mold infestation EVERYWHERE it is not prevented or controlled. Even the most rigid standards of household cleanliness fall short of cleaning inside wall cavities and underground pipes. It is thus safe to say that every structure and outdoor environment in the state has some level of mold infestation.

This is also true in other climates, but in the mostly warm (doesn't freeze often or for long), moisture-rich, humid climate of the Deep South, mold that is not controlled grows at a much faster rate than in climates where the air is drier. In any climate, leaking water jump starts mold growth and speeds along the formation of giant colonies. In Louisiana many water pipes and most air conditioning conduits are located in attics. Roof leaks are first felt in attics as well. It is always a good idea to check out the attic of a building before listing it for sale.

Even the water from a tiny leak can foster the growth of molds if left unrepaired. When neglected for years it is not unusual to find what appears to be a mushroom garden in the attic. In extreme cases mold growth can appear to resemble a scale model of a forest, with multiple forms of growths and a myriad of colors all coexisting merrily together.

Prolonged freezing temperatures in winter help to control some molds, but all are not susceptible to cold. Prolonged freezing temperatures do not occur in our climate, so we do not get even the partial relief from mold growth that occurs in colder climates.

Louisiana and all of the Deep South offer optimal breeding conditions for molds of all types. While the unchecked presence of all molds can cause loss of property value, it is important to understand that not all molds are toxic. Some are just nasty-looking and can be deal breakers if found inside structures, particularly residences.

Conditions that Foster Mold Growth

There are a number of commonly seen conditions that practically guarantee there will be bumper crops of mold unless steps are taken to prevent growth. These conditions include:

- Unheated, locked and unventilated buildings left vacant over a winter.
- All buildings with poor ventilation, a particular problem for office buildings with sealed windows
- Buildings with unrepaired roof leaks
- Buildings with vinyl wallpaper (mold is behind the paper)
- Buildings with synthetic stucco and other materials that do not allow moisture to escape
- Buildings that have flooded and have not had soaked materials removed
- Yards with a thick layer of fallen leaves
- Yards with long undisturbed stacks of wood, bricks, etc.

When these conditions are encountered by real estate licensees a diligent effort should be made to get the property owner to investigate possible mold infestations.

There is no federal or state requirement for mold inspections. In Louisiana owners are required to disclose known mold infestations but inspections are at the option of the buyers. However, for self-protection against possible liability lawsuits it is recommended that real estate licensees take reasonable precautions to find mold infestations in listed properties.

QUESTION:

A licensee is called to list a property that has been vacant for 14 months. All utility services have been cut off for 12 of those months, making it unnecessary to winterize the house. The house has plywood over the windows and doors. On a scale of 1 to 4, where 4 is the most likely, what is the likelihood that there will be mold growing inside the house?

- a. 1
- b. 2
- c. 3
- d. 4

ANSWER:

The answer is d. Conditions in this house are prime for mold growth: poor to no ventilation, no light, lots of growth medium and possibly burst pipes caused by water remaining in pipes freezing.

Black Mold

Finding black colored mold often will kill a real estate deal, but in fact, not all molds that have black pigmentation are the dreaded toxic black mold. Mold colonies tend to grow vertically as well as horizontally. As the layers increase in vertical growth the original color deepens. If left undisturbed, any mold will tend toward black as the vertical colonization increases, causing multiple layers of mold.

Mold colonies also tend to comingle, so that molds of several different colors will all grow together. The mixture of colors eventually will become a uniform black, a phenomenon well known to anyone who was once a child with a water color set.

There is no way to determine if black-colored mold is actually toxic black mold without testing by a professional laboratory. Kits can be purchased at some hardware stores and online and mailed to labs for testing without any worries that the sample will be altered by any conditions encountered during travels. Non-toxic molds will not be “converted” into toxic mold during shipping, and vice versa.

Toxic Mold Remediation

When mold is tested by a professional laboratory and found to be toxic, there is a serious threat to the health of all persons who come into contact with it. Inhalation is the biggest danger. When homeowners who are not professional mold remediators attempt to remove toxic mold by scraping it off surfaces a number of spores sufficient to cause health problems to all persons in the path of breezes that blow over the scrapings.

The person doing the scraping may think a face mask will be sufficient protection, but mold can be inhaled through most masks purchased from a hardware store. Mold spores can also enter the body through the eyes, mouth and any cuts or scrapes in the skin.

Other persons in the area will probably not even have the partial protection of the hardware store mask. The mold spores set free by scraping will also have no trouble finding other places in which to settle, grow and prosper. It is entirely possible for real estate licensees who advise homeowners to scrape off toxic mold before anyone sees it may bring spores home on clothing, equipment, vehicles or their bodies.

QUESTION:

A real estate licensee is listing a residence. In the hall bathroom the vinyl flooring has changed from cream-colored to gray, with black around the bathtub and toilet. The licensee tells the owners to install another layer of sheet vinyl over the old floor after applying a layer of sealer to avoid having to disclose this mold infestation. This advice is quickly acted upon by the sellers. The house is sold and the small children of the new owners begin to display asthma symptoms. A mold inspection reveals a serious mold infestation beneath the new bathroom floor. The new owners sue the old owners and the old owners sue the real estate licensee. Did the licensee do anything wrong?

- a. No. The licensee did hide the mold, the owners did.
- b. Yes. The licensee acted in violation of state mandated disclosure.

ANSWER:

The answer is b. The licensee not only advised the owners to hide a deficiency in the property, but gave explicit directions on how to do so and further suggested that the whole incident need not be disclosed.

It is essential for the personal health and well-being of real estate licensees as well as other residents and properties in the area to advise property owners where any black mold is found to immediately obtain a test kit and have the mold tested.

If the test indicates the mold is toxic, a professional mold remediation company should be hired to remove the mold and locate and repair the moisture source that is causing the mold overgrowth.

Non-Toxic Mold Removal

Non-toxic mold can be removed from hard surface materials by applying hot water with detergent and chlorine bleach and vigorous scrubbing with a stiff brush. This should not be attempted on porous materials such as imitation stucco or cinder blocks as the water will percolate into the material and increase mold danger.

Once the mold has been removed and the natural material that was its growth medium is completely dried, it should be sanded and sealed with a sealing compound that is readily available from paint or hardware stores.

It is definitely NOT “as good as removal” to simply coat the mold colony with sealing compound. All molds require very little oxygen for survival. Some mold is anaerobic, meaning it does not require any oxygen to live and thrive. The sealing compound will bury the mold, but it is burying it alive, thus ensuring that the colony will completely penetrate the host on which the colony is located.

While performing mold removal, even of mold known (not just assumed) to be non-toxic, face masks, protective suits and protective glasses should be worn. Even mold that will not kill, paralyze or cause mental deficiencies can pose a problem for individuals who are allergic.

The area in which mold is to be removed should be protected by plastic sheeting. All mold scrapings, wood shavings and sanding dust as well as the protective gear should be placed in this sheeting and tightly sealed before being placed into a garbage collection container.

Burning mold will often release gases into the air that are more harmful than the mold scrapings. There will be removal instructions on the sealing compound container. Those instructions must be followed to the letter if the sealer is to do the intended job.

Real estate licensees should discuss potential mold problems with sellers before the sellers complete the mandatory Property Condition Disclosure Form. They should be made aware that falsifying the form can lead to, at the very least, a fallen-through sale. At worst, there can be grounds for a civil suit based on falsified contract documents. It is much better to avoid either, and very easily done.

QUESTION:

A licensee who is listing a residence notices a very sharp and disagreeable odor in the carpet. It seems to be coming from just inside the double doors leading to the patio and back yard. The licensee suggests to the seller that a professional carpet cleaner be called to clean the carpet. After the cleaning, the odor is still very strong. The cleaner is called back. He pulls up the carpet to reveal rotted padding and, beneath that, a huge black stain on the slab. The slab itself stinks. In order to deliver a house free of mold the seller must

- a. Have the mold professionally removed
- b. Have the mold professionally removed then sand the slab
- c. Have the mold professionally removed, the slab sanded and sealer applied to the slab
- d. Have the mold professionally removed, the slab sanded, sealer applied and the walls and ceiling washed with a fungicide

ANSWER:

The answer is d. The act of mold removal itself will spread mold spores into the air. A professional cleaner will cover the doorways and windows, possibly even the walls and ceiling, but mold spores are very tiny and easily penetrate even the smallest opening in the coverings.

QUESTION:

Mold in the home is usually found

- a. In dry, well ventilated areas
- b. In moist, poorly ventilated areas
- c. Where pets sleep
- d. Where children play

ANSWER:

The answer is b.

Environmental Hazards from Flooding



Flooding can cause the disruption of water purification and sewage disposal systems, overflowing of garbage and toxic waste sites, and spillage of chemicals previously stored above ground. Cans of unused or partially used paint, fertilizer, weed killers, etc. are found in most homes and commercial sites. Commercial sites often contain, in addition to these chemicals, others that can pose an even greater threat to human health when discharged into flood waters.

In terms of environmental hazards, backwater flooding that originates in rivers and bayous and moves into populated areas is significantly worse than flooding from excessive clean rainwater or burst pipes. Mold hazard, on the other hand, is just as great no matter the cause of flooding. Remember, it is the combination of water from any source with a growth medium and mold spores multiplied by the time things stay wet that cause mold problems.

Cleanup

Most property owners are very careful with floodwater during the period of rising water and immediately after a flooding incident when flood waters begin to recede. Unfortunately, constant exposure to potential dangers may cause owners who are performing their own cleanup to become neglectful of their own and others health. Cleanup after flooding is probably one of the most discouraging jobs most of us will ever undertake. The most common result of this (often unintended) neglect is failure to complete the cleanup to the level of disinfection.

There are significant differences among cleaning, repairing and disinfecting. Cleaning removes mud and other debris from the surface. Repairing returns items to working condition. Only disinfection destroys mold and disease-carrying microorganisms.

All cleanup efforts are aided by ventilation. Ventilation can be improved by the use of fans and commercial heating lamps, and if there is electricity and if those items can be found, their use is recommended. Without fans, etc. simply opening the windows and doors will be a big help in preventing infestations of mold and other unwelcome organisms. Opening the structure to outside air also gives a way out to any live creatures that may have entered with the floodwaters, but take care because it can also be a way in for the creatures exiting neighboring properties.

Sewage

A sewage backup will commonly present a serious health hazard mainly caused by bacteria, viruses and parasites. Sewage backup is dangerous due to the many ways it transmits diseases and because it is usually widespread and thus very difficult to impossible to completely clean up.

Sewage backup hazards are better understood once you learn what, in fact, sewage is; or as it also called raw sewage, sewage sludge, or septic tank waste.

Raw sewage is mainly gray or black water. It usually contains the organic waste and wastewater produced by household and industrial sources. Sewage typically contains everything from soap to solid waste, human excrement, industrial effluent, and debris. It is discharged by drains and sewer lines. It is not unknown for storm winds to cause a shift in the lid of septic tanks or flood waters to backflow private and public sewer and/or water systems.

There are times when the municipal government must step in and perform a cleanup on the portion of water, sewer and other utilities that are not owned and thus not controlled by individual property owners. In this country flooding rarely causes serious outbreaks of infectious disease or chemical poisonings. Most cleanup workers suffer only minor gastric or lung problems, all easily treated with readily available medications. These problems are not typically handled by real estate licensees.

What does concern licensees in the aftermath of flooding, is the presence of microorganisms that cause damage to the property or carry an offensive odor. The odor, of course, is the giveaway for the presence of unwanted microorganisms and/or mold.

All odors are particulate. This means that anything we smell is the result of particles that enter our nasal passages and excite our olfactory nerves. Sometimes we can see the particles; other times the particles are microscopic or even sub-microscopic. The size of the particles may or may not influence the pungency of the odor. Some microscopic or sub-microscopic particles carry a big punch that is all out of proportion to their size. Raw sewage is probably one of those.

Microorganisms can cause property damage when their growth causes rot in wood, carpet or other building materials. It is almost impossible to completely remove the aftereffects of flooding from carpet padding, draperies, insulation and other impermanent materials. Even when carefully washed and completely dried, these items may be unusable because of shrinkage, wrinkling, splitting, etc.



QUESTION:

An out-of-state bank owns several foreclosed residential properties that are vacant and boarded up when a hurricane hits the area. The buildings are 4-plexes, are located in a low area and are thus the first to flood and the last for the flood waters to recede. Several weeks after the flood waters recede, their property managers are able to access the properties. When the managers open the front doors to the units they are greeted by a terrible odor. Mold is growing on all walls, ceilings and tile or carpet floors. What should the property managers recommend to the bank as a FIRST step?

- a. Bulldoze the buildings and sell the lots.
- b. Remove plywood window coverings, carpet and pads and ventilate
- c. Begin rescission proceedings against the former owners
- d. Begin rescission proceedings against the builder/developer of this subdivision

ANSWER:

The correct answer is b. Removing plywood and other damaged materials is relatively inexpensive and will allow a building inspector to determine if the buildings can be saved.

Mold

Mold damage to property after flooding is almost universal after floods. When there is backwater flooding, mold may be more widespread because the water is usually left standing for so much longer, allowing more mold spores to settle and, because the flood relocates large amounts of organic materials on which the mold can feed.

It is very important to learn as much about the type and severity of past flooding when listing a property. It is also important to learn as much as possible about the steps taken in the cleanup effort as possible.

Plumbing, Electrical and Natural Gas

In addition to microorganisms and mold, flooded areas may also harbor plumbing, electrical, natural gas and other fire hazards. These problems can, if not competently repaired, haunt a property for years after the flood event.

Rust and general contamination of electrical service components can result from water having infiltrated electrical boxes during a storm. It may take months or years for the problem to make itself known. It is a very good idea to ask owners of properties with a flood history to describe the work they had done to the electrical service components. If they indicate that the problem was with the municipality's equipment, not theirs, ask to see where the government workers made their repairs.

Properties that are located close to sandy ground, such as those on or near the Gulf of Mexico should have electrical boxes and at least some wiring replaced each time a storm surge washes in water higher than the lowest electrical equipment. Sand in the storm surge waters settles while water is standing and filters into any handy receptacle it can find. A switch box, fuse box, or etc. that has had wet sand in it for several days may need to be replaced. At the very least, a competent electrician should have inspected it for damage.

In any case of freshwater or back water damage to a home or business, there always is the question of whether or not the electrical system has been compromised. Water and electricity are a dangerous, potentially lethal combination, and a compromised system can, as noted, not make itself known for a good while after the flood waters have receded. This could be a very nasty surprise for a real estate licensee showing a property who flips a switch and gets more energy than bargained for.

Cables should also have been inspected. Any and all wiring or cable products that have been exposed to or submerged in contaminated floodwater should be examined by a qualified electrical contractor in order to determine if the cable is safe for continued use.

Not all cables will fail immediately when energized; in some cases it may take months for the cable assembly to fail. In other cases when the municipal workers turn on electricity after making repairs there can be electrical surges that cause damage to buildings that have already been repaired and inspected.



In any case, the report of electrical contractors are the best source for making the proper determination on what may and may not have been done. If there is no report, a job bid or itemized statement presented to the owner by the electricians might tell the story.

Natural gas lines must come to the surface of a property at the meters and point of entry into the building. If a house has a history of flooding and has gas heating or any other gas service, licensees should specifically ask owners for a report on any disruption of gas service during and after a hurricane. If a large tree (or trees) were brought down during a storm it is possible for a branch to pierce the water-softened soil; it can also pierce, split or crush a gas line buried beneath the soft soil. Splitting or crushing of gas and water lines can occur from the force of a weighty item such as a tree landing on the soft ground. The housing around buried cables, or the cables themselves can similarly be harmed.

“Wet” hurricanes are the worst culprits for general water intrusion into buildings. Even though the rainwater is relatively clean, there is so much of it that there is no way to drain it. It simply stands over the whole storm area, filling drain boxes and all available low areas. Then it fills the not so low areas. By the time all low areas are filled, the formerly clean rain water has become contaminated by raw sewage, among other things.

Roofs, Ceilings and Interiors

There is also the damage to roofs and ceilings that can be caused by wind, wind-driven rain, and the collision of airborne objects when a roof is hit. There is usually no way (nor any sensible reason) to repair roof damage until a storm is over. In the case of hurricanes, it is sometimes possible to make makeshift repairs while the eye is passing over a building, but this can be very dangerous and is not recommended. By the time the storm is completely passes, there can be significant damage to the interior of a property, which will be quickly followed by mold growth until all the wet items are removed, the roof repaired and all wet areas thoroughly dried.

When listing or showing properties with a flood history, it is a very good idea to inspect attics first. Buyers should be advised that they or an inspector of their choice can make a cursory inspection of attics and other suspect areas (lower portions of walls, wooden subfloors, etc.) before they make an offer. If they choose to ignore this advice, ask them to do so in writing.

Disclosure is the key to listing and selling properties with a flood history. Disclosure should be made of the property's past flood history, and all possible details should be included in the disclosure. This is primarily for the protection of both buyer and seller, but it is also for the protection of all real estate licensees involved in the transaction.

Property inspectors should also be informed of the type, duration and remediation efforts of any formerly flooded property so they will be on the lookout for specific problems. Being a new licensee is no excuse for not providing adequate disclosures. If new licensees expect to be paid at the same rate as experienced licensees they should provide as close to the same level of service as is expected from the old timers.

Newly licensed individuals should be prepared with a list of questions to ask about properties with a flood history; they should also have done enough research to understand the implications behind the answers the sellers give them.