

The Louisiana Toxic Mold Task Force

Created by Act No. 258 of the State Louisiana Legislature – Summary Report

Initial Summary of Discussion and Work to date – January __, 2015

The Louisiana Toxic Mold Task Force, created by Act No. 258 of the 2014 Louisiana Legislature, hereafter referred to as “the task force”, met for the first time on September 19, 2014, with the majority of members in attendance, including several Louisiana state health department and university academic experts. The task force was created to serve as an advisory board to the legislature on policies and practices that protect all people of this state, particularly tenants, consumers and vulnerable populations from possible harm related to mold and excessive moisture. We submit the following summary and comments:

The Task Force has met with and/or spoken to many different parties that are knowledgeable about the subject matter relative to the mission to obtain additional information to guide us in our assigned task on the health effects and prevention of mold.

It is important to point out that during our discussion, it was found that there are many misperceptions and mistruths about mold, such as who is affected, as well as the causes and impacts to property, living conditions, health, and how to remediate or remove mold. The task force felt it was important to do as much background investigation as possible, among its members as well as others knowledgeable in this field, in order to provide correct data and information in our initial report to the Legislature.

Initial findings from meetings and task force research include:

General Causation

Molds are multicellular micro-organisms that are ubiquitous throughout the environment; they are found indoors and outdoors in air, soil, water, and decaying vegetation. There are thousands of species of molds. Many will exist as spores when the environment is dry. The term “mold” generically refers to visible fungal growth without referring to a specific species of organisms. Molds reproduce through spores that are very resistant to adverse conditions including dryness and heat.

Molds are generally not observed in the indoor or outdoor environment until moisture stimulates the growth of both the number of organisms and the growth of filaments that are commonly recognized as mold. Dormant mold spores will “bloom” into visible molds when moisture is present. The Louisiana climate with high humidity and high amounts of rain is conducive to mold growth.

Molds are commonly observed following flooding; dampness from floodwaters creates the perfect environment for molds to grow. Wet sheetrock/wallboard, carpets and other porous materials provide the moisture and nutrients for molds to grow very rapidly. Molds are common sources of indoor air quality issues. Molds will grow in areas that are damp and are often associated with excessive moisture, i.g. water leaks, condensation or

The Louisiana Toxic Mold Task Force

Created by Act No. 258 of the State Louisiana Legislature – Summary Report

poor ventilation that allows moisture to accumulate. Areas with mold growth often have a “musty” smell regardless of whether or not mold is visible.

The Louisiana Department of Health and Hospitals, Section of Environmental Epidemiology and Toxicology (SEET), receives phone calls regarding indoor air complaints and provide information concerning indoor air issues. Complaints related to mold are most often associated with flooding, with poorly maintained buildings with water leaks, or inadequate ventilation that allows condensation to accumulate.

According to several Louisiana State certified remediation companies, most calls requesting assistance for mold-related issues are for mold which has been unofficially identified (not tested). Excess moisture promotes mold growth. The following are known conditions which create the environment necessary for mold growth:

- 1) Environmental Factors
 - A) Excessive shading
 - 1) Trees with large canopies preventing sunlight contact
 - 2) Large buildings or objects continually restricting the duration of sunlight
 - 3) Crawlspace and other improperly vented areas around all structures
 - B) High dew points and Excessive humidity
 - 1) During certain times of the year, dew points (measurement of moisture in air relative to temperature) rise and create a moist environment.
 - 2) Higher humidity levels caused by climatic conditions (> 50% in the indoor environment) provide a source for mold growth relative to the above.
 - 3) Conditions are at their peak for mold growth when dew points and humidity are at equal or close to the same levels.
 - C) Prolonged Moisture
 - 1) Continuous moist and damp conditions due to excessive rain, flooding, and ponding of water due to improper drainage
 - D) Construction factors
 - 1) Lack of proper seal on the exterior façade of buildings, including, but not limited to roofs, windows, doors, stucco, brick, siding materials and chimneys.
 - 2) Improper installation of Heating Ventilating and Air Conditioning systems (HVAC), hood vents, dryer vents, or other mechanical vents. In some cases, mold may result from increased relative humidity based upon indoor and outdoor temperatures, air flow, negative pressures created by improper sizing of HVAC, mechanical failure or lack of fresh air damper.

The Louisiana Toxic Mold Task Force

Created by Act No. 258 of the State Louisiana Legislature – Summary Report

- 3) Improper duct installation as well as insulation installers' not providing proper seal at building envelope are another common occurrence.
- E) Maintenance
- 1) Mold can result from Fan set to ON, as opposed to AUTO – When a unit is set to “ON” only, dehumidification of air does not take place. This practice occurs in the homes, businesses or offices of people of all income levels and at all dwelling sites, from apartment tenants to home and business owners.
 - 2) Aging materials on the façade of any structures
 - 3) Plumbing leaks
 - a) In apartment buildings, a lack of maintenance and lack of proper seal for building envelope as well as the sealing of supply ducts and returns; the entire exterior of the building should be thought of as a “building envelope”.
 - 4) Maintenance of unit coils and blowers is not done “as frequently as needed”. HVAC unit coils and blowers should be serviced and cleaned annually. Internal electronic air cleaners require servicing every 3-5 years.

While the above present common causes of mold growth, they also represent areas that may be addressed, to avoid the growth of mold and in other cases, to control it. Continued public and HVAC/Mechanical Contractor education in these areas and attention to proper construction methods and maintenance can improve our ability to prevent mold. In addition, a review of current building codes with the intent to refine outdated and improper building practices that may contribute to the propagation of mold is identified as a priority for the task force. The task force will continue to study and identify recommendations in these areas.

Identification

There are thousands of species of fungi that are called “molds”. The presence of visible mold and/or musty odors are indicators of indoor mold. Molds are frequently black, grey or white, but may also be other colors including those with a pinkish color. Laboratory analysis can identify species of mold and the quantity of mold spores in multiple media. The identification of the specific species of mold is not necessary to take actions for clean-up and implement the steps to prevent further mold growth. The remediation steps are the same for all types of mold.

Testing for the number of mold spores after remediation is a means to monitor the clean-up. However, there are no environmental standards for the detection of mold (e.g., media, method of analysis, length of sampling period), nor are there health-based standards. Since molds are ubiquitous, some number will usually be detected. It is important that testing be conducted by a separate entity than the remediators,

The Louisiana Toxic Mold Task Force

Created by Act No. 258 of the State Louisiana Legislature – Summary Report

both to prevent conflict of interest, and because this separation is required in Section 2187 (B) of the Louisiana Contractor's Licensing Law (La. R.S. 37:2150-2192).

Controlling Mold Growth:

Controlling moisture is essential to preventing mold growth. Cleaning up mold will not be successful unless water/moisture problems are fixed. Steps homeowners can take to minimize mold are:

- Quickly fix water leaks and stop water from going into homes and buildings.
- Completely dry wet building materials, furnishings and carpets within 48 hours of getting wet, if possible.
- Replace water-damaged items as soon as possible.
- Make sure that heating/ventilation/air conditioning (HVAC) systems are always running, to keep the right amount of air flowing inside of the building.
- Keep indoor relative humidity below 60% (ideally, between 30% and 50%). Good airflow and dehumidifiers help to keep humidity low. Check roofs, ceilings, walls, floors and carpets for water leaks, mold growth, or musty odors.
- Do not let sprinklers hit buildings or homes. Fix broken roof gutters. Routinely replace air conditioner filters and clean drip pans. Make sure stoves/ovens, bathrooms and clothes dryers are vented to the outside of the home, if possible.

Remediation

Mold remediation is defined as the process in which mold is cleaned and removed from a building, either through professional or non-professional methods. Typically, mold remediation involves proper removal of porous, water/mold damaged building materials from a structure and use of bleach or specific chemicals and cleaners formulated to remove existing mold and prevent future growth. There are several facts about identification, mold prevention and remediation worth pointing out, including but not limited to the following:

- 1) Remediation can be provided by a state licensed mold remediation company. Act number 880 of the 2003 legislative session created a separate license for Mold Remediation Contractors under the authority of the State Licensing Board for Contractors with the stated purpose of requiring "qualifying criteria in a professional field in which unqualified individuals may injure or mislead the public."

The law was very timely, having taken effect on July 1, 2004, the year before Hurricane Katrina struck. Hurricane Katrina left extensive water damage and resulting mold infestation throughout the interiors of thousands of south Louisiana homes. Many mold remediation contractors were prepared to help, having completed the training programs required to obtain the license.

The Louisiana Toxic Mold Task Force

Created by Act No. 258 of the State Louisiana Legislature – Summary Report

The required 24 hour training program on mold remediation and basic mold assessment serves to educate mold remediation contractors on mold identification, inherent mold vulnerabilities, and on proper treatment and remediation strategies. Improper use of some mold remediation measures can potentially lead to property damage, injury, illness, or even death in some cases. The required four hour course on the Louisiana Unfair Trade Practices and Consumer Protection Law also identifies for the license applicants practices which may be considered unethical or illegal so that they can be aware of what is expected of them under state law. These training programs are administered by independent training providers accredited and approved by the Board.

License applicants must also take and pass the Board's Business and Law examination, which is required for all contractors licenses. This examination helps to ensure that contractors are aware of basic business practices for contractors and most relevant laws that affect them.

License applicants must hold general liability and workers compensation policies. In addition, they must be clear of any unaddressed judgments, tax liens, etc., and provide a financial statement prepared by an independent accountant showing a net worth of at least \$10,000.

As of January 1, 2015, there were 188 licensed Mold Remediation Contractors.

Those who violate the provisions of the law may be fined up to two thousand dollars per violation and ten thousand dollars for each subsequent violation.

Exceptions

Exceptions to the licensing requirement include owners and their employees when remediating their own property and Residential Building Contractors when remediating no more than 20 square feet on a property when acting within the scope of their license.

- 1) After flood events that enter into a home or building, all drywall and insulation as well as any other damaged building materials should be removed as soon as possible. Removal of these materials should be performed by a licensed general contractor to ensure that mold remediation is not necessary. If mold is found during the removal process exceeding 10 square feet, a remediation specialist should be contacted to verify proper protocol is followed.

The Louisiana Toxic Mold Task Force

Created by Act No. 258 of the State Louisiana Legislature – Summary Report

Who can Remediate – what is the process?

- 1) Although a certified professional is not required to clean duct work or plenums, as well as blowers, coils, etc., the Contractor’s Licensing Law requires that contractors who remediate mold for contracts of one dollar or more must hold a Mold Remediation Contractors License with the State Licensing Board for Contractors. As mentioned previously, building owners and their managers and homeowners may perform their own mold remediation without a license. In our research, it was found that individuals may pay more than necessary to have qualified mold remediators assist when the assistance may not be necessary.
- 2) When there is mold present, most calls to assist with mold remediation are made to individual HVAC contractors, general contractors and/or handymen.
- 3) Calls to mold remediators usually come from an HVAC Contractor or a General Contractor after noticing an issue beyond their scope or abilities, during a routine service call or call for repair work on another related issue. Such issues may include:
 - A) Heavy mold growth on walls, cabinets, under tubs, in HVAC plenums, coils, ducts, HVAC grills and returns and on doors, ceilings, and walls.
 - B) Smell or odor coming from enclosed area of a home or business.
 - C) Humidity level high even though A/C is functioning correctly.

Removal of Mold

Some of the methods for removing mold are listed below:

- 1) A vacuum equipped with a HEPA filter (High Efficiency Particulate Absorption) can be used to remove mold spores. Vacuuming with a HEPA vacuum and brushing can help to remove mold. The HEPA filters in HEPA vacuums trap very small particles like mold spores and other allergens. Mold spores are too small to be trapped by the filters in non-HEPA fitted vacuums. Most mold spores simply end up passing through this system and back into the air.
- 2) Surface mold can be cleaned with the proper chemicals, but moisture and the source of moisture must be removed to avoid a reoccurrence of mold. Special attention should be paid to the sealing of A/C returns, duct work and plenums, etc., as this is a typical area for mold to flourish and grow in.
- 3) Soda blasting, a practice in which soda bicarbonate is forced out by compressed air to blast surfaces clean, should be used in conjunction with negative air pressure machines and air scrubbers combined.

The Louisiana Toxic Mold Task Force

Created by Act No. 258 of the State Louisiana Legislature – Summary Report

The 2009 IRC (International Residential Code) can be purchased for more detailed information on HVAC installation methods and best practices.

Remediation Services and Prevention Methods

- 1) Most mold-related calls are handled by an HVAC or General Contractor who normally charge a service fee to come out to the site and assess the situation. Generally, HVAC technicians and General Contractors charge a minimum fee to visit the site and make a verbal assessment of the problem. Additionally, if requested, they can provide a written report documenting the issue, while giving a suggested resolution with no remediation provided. Should professional remediation become necessary, a referral to a certified mold remediation specialist should be provided.
 - A) Costs of mold determination are varied depending on the level of mold contamination but severe cases can inflate the cost of discovery and remediation exponentially.
 - B) There can also be an additional cost, depending on the location and difficulty in assessing the mold issue, to provide a blower door test, as well as an infrared camera scan of rooms, ducts, equipment and supply areas that are open to view. A written report is also provided with this service.

NOTE - Mechanical codes for 2015 will require energy and heat load calculations to be provided using the following methods. The following manuals from the Air Conditioning Contractors of America are referenced by the IRC:

- A) Manual S –All information regarding the home or building relative to windows, doors, flooring, and exterior façade is loaded into a computer program as well as brand name of equipment. Data base will specify the size and model of the unit needed for a proper installation.
- B) Manual J – HVAC Contractor shall load information into this program regarding - the volume (Size) of the heated and cooled area as well as the total assumed heat load relative to the location of home, glass area and insulation values. In this program, the HVAC contractor selects the equipment to be used. At this time, this is the only program used consistently by most HVAC Contractors.
- C) Manual D – is a computer program that is used in conjunction with both programs above to determine the duct size required for the tonnage provided by the equipment to be installed.

The Louisiana Toxic Mold Task Force

Created by Act No. 258 of the State Louisiana Legislature – Summary Report

Insurance Coverage in Addressing Mold

An important financial concern and question that consumers should have relative to their insurance coverage is whether their policy includes options for the payment of mold remediation and/or cleaning.

- 1) Most liability insurance companies do not provide any coverage for dealing with a mold issue; in fact, there are typically specific clauses that exclude mold in some insurance policies. More attention needs to be given to educate consumers and policy holders on whether or not mold coverage is provided in individual policies and, if so, what is covered.

Health Effects of Mold

Numerous studies have been conducted on health effects related to mold. In 2004, the Institute of Medicine (IOM) conducted a comprehensive review of scientific studies to examine the possible relationships between reported symptoms and molds and damp environments. The IOM found evidence of association (but not causal relationships) for irritation of the upper respiratory track (nose and throat) and allergic reactions including rhinitis and sinusitis. The IOM report found sufficient evidence of an association between exposure to mold in a damp indoor environment and exacerbations of asthma in sensitized asthmatics; however, there was insufficient evidence of an association between the development of asthma in people not previously diagnosed and mold in a damp indoor environment.

Following Hurricanes Katrina and Rita, the flooding in New Orleans stimulated overwhelming mold growth in homes and buildings. A large proportion of the population was exposed to molds. Surveys of individuals cleaning-up visible mold in flooded homes, cough, wheezing and runny noses were reported. Other studies conducted post-Katrina that examined respiratory symptoms or respiratory function did not show an impact related to mold exposure. Invasive fungal infections were not reported. In pediatric medical literature in the past two decades, there have been outbreaks of Acute Pulmonary Hemorrhage in young infants exposed to mold in Ohio, Missouri, Delaware, North Carolina, and New Zealand.

The above summarizes discussion to date and provides information on the major issues identified by the task force. The task force respectfully submits this document as an initial report, with the following next steps and recommendations serving as the highlights of the direction it will take to further fulfill the requirements of Act 258.

The Louisiana Toxic Mold Task Force

Created by Act No. 258 of the State Louisiana Legislature – Summary Report

Next Steps

- 1) The task force feels very strongly that its credibility lies in its ability to rename the Task force mandated by Act 258, “The Task Force on Mold in Louisiana.” The removal of the word toxic will create the elimination of a deadly and improper connotation to a troublesome, yet manageable environmental element that with proper education and construction practices, can be controlled. Task force members agreed that referencing mold as “toxic mold” incites undue anxiety and that defining the causes, characteristics of mold, and the processes for handling are important first steps in addressing the legislative directives. The task force Chair and others are willing to meet with Act 258’s legislative sponsors to address this concern.
- 2) Discuss issues related to mold due to poor building maintenance (including public buildings)
- 3) Develop a plan and promulgate (as needed and appropriate) a coordinated effort among enforcement agencies (permits and code officials), HVAC Contractors, Builders, Homeowners, Business Owners, Apartment dwellers/owners/managers, Real Estate Agents, and other parties to educate the public on the following:
 - A) Understanding what causes mold (possible causes as presented in this document)
 - B) Understanding options for defense and treatment of mold (possibilities included in this document as a starting point).
 - C) Leverage existing knowledge and scientific evidence of magnitude and impact of mold through coordinated methods and venue.
Legislative input may be beneficial in this regard.
- 4) Address mold issues following flood events including removal protocol
 - A) Discuss and develop a proper protocol for identifying mold and removal of same after flood events.
 - B) Develop best practices for proper protection against inhaling debris and airborne mold spores during removal which should also include correct disposal methods.
 - C) Discuss options on the dissemination of media materials to create public awareness on what protocol to follow immediately after a flood event, including a list of Certified Mold Remediation Contractors.

The Louisiana Toxic Mold Task Force

Created by Act No. 258 of the State Louisiana Legislature – Summary Report

- 5) Discuss education related to steps homeowners and building owners, as well as the general public, can do take to prevent mold and to address common causes of mold.
 - A) Study and define enforcement changes to the 2009 International Building Code which will be enforced after January 1, 2015.
 - B) HVAC System design will include more specifics as to equipment required for individual residences and businesses to help minimize issues related to methods currently used.
- 6) Develop and disseminate methodically, new public education materials on normal mold control, better building practices, mold remediation protocols for removal including the following:
 - A) Proper ventilation
 - B) Mitigation of moisture intrusion issues
 - C) Proper cleaning and maintenance of HVAC equipment
 - D) Proper sealing of home and businesses including windows, roof, doors, flashing, caulking, and venting.
 - E) Proper installation of all HVAC equipment and insulation materials
- 7) Define and develop educational opportunities on health effects of mold, and better inform the general public by the following:
 - A) Inform the public that there are no major causes of ill health effects due to mold in normal, otherwise healthy individuals, other than a potential cold-like symptom or respiratory discomfort, noting that while troublesome, the effect is not “toxic” in nature as the term is generally understood or used by the public.
 - B) Emphasize the importance of managing and controlling disease in individuals with immunosuppressed conditions, such as asthma, etc. Relate science which confirms that individuals with well controlled symptoms and who are under medical management of a condition such as asthma are not prone to react negatively to exposures to mold.
 - C) Create greater awareness of health effects normally due to mold as being a quality of life issue; pay special attention to apartment dwellers and apartment owners and managers, as well as low income home sites to ensure attention to best practices in mold identification, cleaning and remediation as an ethical concern.
 - D) Dispel myths and untruths regarding mold exposure and toxicity
 - E) Define efforts in place and necessary to address and deal with mold issues, including certification and licensure of remediators, insulators and HVAC contractors.