

Advanced Mold Testing and Mold Remediation Services

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Certified Mold Remediation...Black Mold Removal
Serving the Massachusetts & Southern NH Areas

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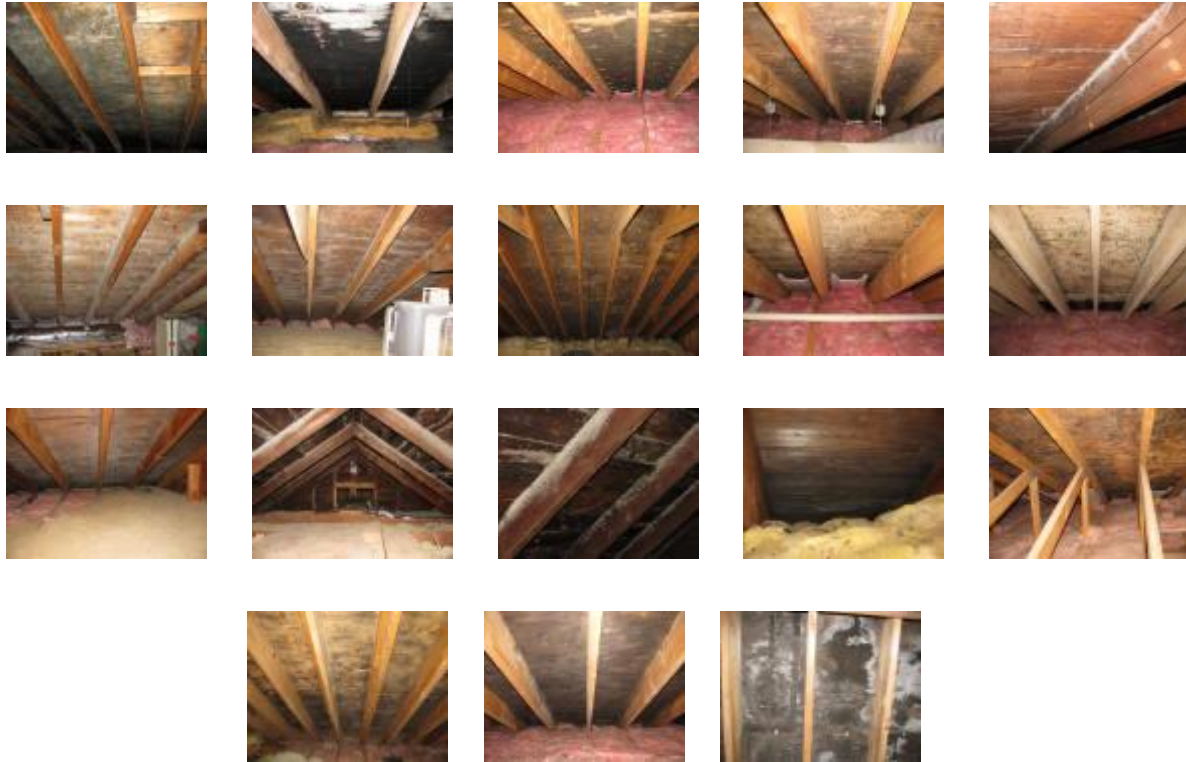


Current MA Mold Remediation Reg. Lic. # 167724

Attic Mold Remediation - Black Mold Removal

Attic Ceiling Mold Pictures

These attic mold inspection photos are from some recent mold remediation jobs we have performed. As you can see, the mold types and severity vary from one attic to another. We were able to restore all of these heavily mold contaminated attic ceilings to a mold-free condition with clean looking wood.



Simple Strategies For Understanding & Correcting Attic Mold

- Attic mold is extremely common in our Northern climate.
- Attic Mold growth is generally directly attributable to 4 basic causes.
 - Lack of adequate attic ventilation or improper ventilation
 - Improperly exhausted bathroom fans, and or, dryer vents
 - Failure to install enough roofing "Ice Shield Membrane"
 - Existing, or past roof or roof flashing leaks

By far the most common cause of all attic mold is

Improper Ventilation

We'll briefly discuss each problem and the appropriate remedy as well as covering the basic mold remediation strategies recommended for the Massachusetts area. Let's start by explaining that in most attics mold does not grow in the summertime. This is because during

the spring, summer and early fall months the daytime temperature of the attic is far too hot for the mold to effectively grow and the humidity levels inside the attic are typically too low to allow mold growth. Most molds will only grow between 40 and 90 degrees Fahrenheit. Some molds that belong to a special class of mold (the ones usually affecting northern climate attics) called the Chrysophila molds will grow in temperatures as low as the 20's. Cladosporium or penicillium mold are frequently found growing on damp attic ceiling sheathing. Another common attic mold is aspergillus. It's commonly found growing in poorly ventilated attics on the ceiling joists.



Attic Ceiling Mold With Frosted Nail Heads in the Winter

How Mold Growth Occurs

During the winter months when we heat our homes, some of the heat is inevitably lost into the un-heated attic space. This warm heated air should move upward towards the attic upper ridge vent and harmlessly dissipate outside the attic, but this only occurs if the attic is properly vented.

If however, the attic is poorly vented, the warm trapped air will start to condense on the cold surface of the underside of the roofing boards or sheathing. This warm air meeting a very cold surface results in a dew-point being achieved. This dew-point created condensation is often more noticeable on the roofing nails as the nails are more efficient at conducting the cold temperature from outside. The condensation on the roofing nails then forms water droplets which can drip onto the floor of the attic. When the night-time temperature is cold

enough the nail heads will start to frost up like in the picture above. This only occurs in poorly ventilated attics.

Sometimes a roof will have sufficient roof ventilation (ridge vent), but the soffits (eaves) are not vented. Even more common is when a house receives new siding. The siding contractor will install vented soffit panels. This gives the eaves the appearance of being vented, when in reality they are not, as no vent openings were ever cut into the plywood covering the bottom of the eaves. Sometimes the attic is ventilated properly, but an over zealous attempt to insulate the attic floor has restricted or totally blocked the air flow from the soffits to the ridge, preventing proper ventilation. An easy way to check whether or not the soffit vents are there, or are functioning properly, is to go up into the attic on a sunny day, extinguish all lights and look for daylight coming in along the edges. Well ventilated soffit bays should have visible daylight coming in along the lower soffits. There are different styles of soffit and ridge venting, some work much better than others. Ask our inspector what venting improvements are needed to properly ventilate your attic.

What is the best way to vent the roof?

Roof ventilation is divided into two categories: **Incoming air** and **Outgoing air**.

Incoming Air: The most effective way for air to enter the roof is through vents that are placed in the soffits along the eaves. Continuous strip vents provide the most air-flow. Rectangular vents are also acceptable if enough are installed and the wood above them has been mostly cut out before the covers were installed.

Round ventilator caps are also a good option and are easy to install, but must be large enough to provide adequate air flow. Many of these round ventilator caps have very fine screens built into them that will severely restrict air flow into the attic. So, the proper vent caps will be needed. We now carry them for your convenience

in multiple sizes. If your house has gutters all soffit venting must be from underneath the soffits. Drip edge vents, like hicks vents, fail to vent when snow or ice accumulates in the gutters and covers up the vent above.

Note: Homes without soffit overhangs like gambrels - can sometimes be vented from the lower roof line, if a

drip edge vent (hicks vent) can be installed. If not, air will need to be exhausted out a side gable vent.

Outgoing Air: Rising attic air escapes through the top of the roof. There are many ways to achieve sufficient ventilation including: Ridge Vents, Turbines or Powered Vents, Box Vents and Gable End Vents.

High air flow continuous ridge vents are the preferred method for eliminating built up hot air, but may not be sufficient to ventilate short ridged roofs like on hip roof homes.

Ventilating attics or cathedral ceilings properly is often neglected during initial construction. Mold growth commonly occurs behind poorly ventilated cathedral ceilings and crawlspace exterior ceiling insulation.

Balanced System: For attics to adequately ventilate, both proper soffit venting (intake) and ridge/roof venting (exhaust air) are needed. One is no good without the other.

Remember, attic ventilation requirements can change over the years as moisture levels change inside our homes.

Roof Leaks: They always need to be addressed by a professional roofer and special attention needs to be paid to flashings around chimneys and indeed any penetration found in the roof decking. Flashings often require maintenance between roof shingling jobs and are extremely important to maintain. Roof leak can often develop into festering mold problems both in the attic cavity or worse, inside of hidden wall cavities in the home.

Ice Damming: occurs along the eaves immediately above the plate-line of the exterior walls. Leakage in this area easily penetrates into wall cavities where it can become trapped between exterior finish materials and interior vapor barriers. A surprisingly small amount of water can raise the relative humidity of a wall cavity to damaging levels. Mold growth may eventually become visible along the wall base as it penetrates from exterior to interior wall surfaces. More critically spore and VOCs (Volatile Organic Compounds) released by mold can aggravate serious health problems in the house's occupants. Especially at risk are the very young and the old as well as allergy –sensitive or immune-compromised adults.

In some mild cases ventilation corrections are enough to cure the problem in severe cases the roof shingles must be removed and an ice dam membrane material (Grace is top rated) installed along the lower eaves. It should run 6 feet up from the eaves. On a very shallow pitch roof the ice dam membrane should run the entire length from the eaves to the ridge vent. A quality ice-dam membrane will seal around all the roofing nails and prevent water from ice-dams and wind driven rain from wetting the wood sheathing under the shingles. In severe cases mold growth can also spread down into the exterior walls. The drywall and wall insulation would then need to be professionally removed and disposed of and mold remediation performed.

Improperly Vented Bathroom Fans: Bathroom fans and dryer vents can generate a lot of moisture. They should be vented directly up and out through the roof or through the attic side-wall. The second choice is through the bottom of the soffit overhang. Often times builders or do it yourselfers, will discharge fans or dryer discharges directly into the attic, greatly increasing the overall humidity. Do-it-yourselfers often try to connect more than one fan into a discharge and will commonly run the discharge out to the eaves or soffits rather than straight up and out through the roof. The remedy is simple, one fan, one roof vent, vertically up through the roof overhead. On the outside the vent has a hat and is not a risk for water leaks. Remember, the soffit vents are air intakes. Venting a bathroom or dryer through a soffit vent will allow some of the moist air to get drawn right back into the attic, especially if a poorly designed vent housing is installed.

Attic Mold Remediation Treatments

Unfortunately there are as many “treatments” for mold as there are remediators out in the real world offering “mold remediation”. Mold spores can grow at alarming rates. Under ideal conditions, one mold spore can develop into 12 million in twelve hours!

Also, the mold is feeding on the attic ceiling sheathing and ceiling joists and what you can see with the naked eye are millions and millions of them clumped together. What you can't see are the "roots", the mold organism itself. The roots of mold (hyphae) can grow into the substrate 3/16 of an inch or deeper. What we think of as the mold (the clumped spores) are actually the fruit or reproductive body, like an apple on a apple tree. You cannot hope to solve a mold problem leaving these roots and treating only the surface of the wood.

Common problem: Treating mold growth on a porous surface, such as wood, with bleach. Bleach has an ion structure that prevents it from penetrating into a porous substrate like wood, this means it leaves the roots un-harmed. This technique leaves the complete root structure intact and guarantees that if you ever have a new water leak, or moisture continuing to condense on the attic ceiling, the mold will go right into full production and the mold problem will immediately return.

Our Mold Remediation System

Phase 1 - Prepping the Home

The first thing we do is site preparation. We isolate the attic from the rest of the house. We'll install a heppa filtered air scrubber machine. We put down protective covering through the walkways of the house where we will be working. This important step protects your home, and guarantees no staining or dirt is carried into the carpets in the home. Your house is important to us we will treat you as if we were working on our own house!

Phase 2 - Killing the surface mold growth

We apply a moldicide/cleaner/disinfectant/sanitizer to the attic ceiling and joists that was specifically formulated for mold remediation and will kill all types of attic mold.

Phase 3 - Removing the Mold & Mold Stains - Getting Rid of the Evidence

This is absolutely a must. Removing the darkened mold & mold stained areas is a very important part of the process. This is the most difficult part of the mold remediation process and the part that most companies fall short on. We pride ourselves in performing this important step.

Buyers & Homeowners Beware: Mold remediation companies vary considerably in the quality of the mold remediation services they provide. This is why the cost of mold

remediation varies so much. Some companies will simply spray a product to kill most of the surface mold and still leave you with dark visible mold. That might be all they do. Others at this point will just spray a clear sealer over the dark mold to encapsulate it, but you will still see the mold through the sealer and it can't ever be cleaned again. Others, will cover your entire attic ceiling sheathing, ceiling joists and side-walls with a white pigmented low quality paint product to cover-up the darkened mold areas. This white coating, depending on quality, will usually start to peel-off in about 2 to 4 years where applied over these poorly cleaned or un-cleaned areas. When this happens the ceiling also can't be cleaned again. Total replacement of the roof sheathing is usually needed at this point, but you will still be left with strange looking white painted ceiling joists and both attic side-walls will still be white. A white painted attic ceiling signifies a past mold problem and puts up a red flag to future buyers and home inspectors. Attic mold remediation & proper venting corrections need to be performed correctly the 1st time to prevent large future re-roofing expenditures. If attic ceiling mold remediation isn't performed properly the 1st time, future buyers will think there is still a mold problem and ask you to pay for new mold remediation cleaning or roof replacement before buying your house.

We get the attic ceiling wood looking clean and bright, so when we apply our final long lasting clear anti-microbial sealer you can see the clean bright wood through our transparent protectant sealer.

Phase 4 - Kill the Roots, This will keep it from coming right back!

Fungicide application to the Attic Sheathing and Joists:

We actually impregnate the attic ceiling wood with an environmentally friendly solution from the mineral family. This product is absolutely amazing. It's designed to penetrate deep into the substrate (mold roots commonly grow 3/16's of an inch into the wood) and kill the roots of the mold. It not only prevents all hosts of decay and fungi, but it also prevents wood boring insects such as; carpenter ants, powder post beetles and termites.

Phase 5 - Application of an anti-microbial sealer

This is also sometimes referred to as an encapsulant sealer. These coatings come either as a clear, or a white tinted sealer. They vary in quality. The most important qualities are durability against peeling and preventing new mold re-growth. Many people mistakenly apply a white paint coating like Kilz, instead of a high quality anti-microbial sealer. I've seen many properties where the mold is re-growing right on the white coating material. Many companies apply a heavily pigmented white coating over poorly cleaned areas to cover up remaining mold areas. White coated attic ceilings send up a huge red flag to future home inspectors. This will lead to you having to answer many mold related questions from the buyer. Remember, most coatings will peel within a few years if applied over un-cleaned mold areas. This results in a difficult very expensive redo. Redoing a failed mold remediation job to a peeling attic ceiling is most difficult. Frequently, when this occurs the owner will have to have the entire attic ceiling sheathing replaced. Then, have the remaining attic side-walls and the front and rear attic ceiling joists remediated again for mold growth. Unfortunately, to replace the peeling roof sheathing requires you to have all the roof shingles removed and replaced. Replacing the roof shingles, roof sheathing, ice-damming membrane and then

having to also pay for new mold remediation to the existing attic side-walls and ceiling joists commonly costs well north of \$12,000. Its very important to do it right the 1st time.

We use a high quality, long lasting, clear anti-microbial sealer on attic ceilings 99% of the time because we get the dark mold covered ceilings looking clean and bright.

A high quality anti-microbial sealer should also be applied if there is any chance of the ventilation corrections not being adequate to properly vent the home's moisture out of the attic, or if, the home has higher than normal basement or upstairs moisture levels, or if any warranty is needed. Without a properly applied quality sealer the attic ceiling mold could grow right back in just one winter if humidity levels were high enough.

Note: It doesn't matter if ventilation corrections are done before, or after mold remediation is completed during the warm weather periods. But, attic ventilation corrections should be performed as quickly as possible after remediation during the cold weather months. This is because attic ceiling mold grows during the cold weather period in poorly ventilated attics.

Long Extended Warranties

Advanced Mold Remediation warranties average from 5 to 7 years.

How long does it take ?

Typically we can complete the part 1 cleaning in 1 day. Two days for a larger or difficult to work in attic. We then return after drying to apply the protectant sealer. The work for an attic is typically done by a two or three man crew, who work exclusively on attic and crawlspace mold problems day in and day out, week in and week out. They are highly trained and very efficient.

How Much Does it Cost ?

The prices that are currently being charged by other companies can vary significantly. Average attic remediation costs industry wide vary from \$2500 to \$6000. Our rates average between \$2000 - \$3900.

It depends on how much area needs cleaning, how heavy the mold growth is and if the attic has blown-in insulation. Attics with blown-in cellulose insulation are the most difficult to work in, so they cost more than average.

Something the homeowner should be aware of: The finished visual quality of mold remediation work varies widely from company to company in this industry. Some companies will leave a lot of black discolored ceiling sheathing after they finish. This will lead to many questions and concerns for future buyers. If you want the attic ceiling sheathing to look like

there was never a mold problem, we're your company. We get most black moldy attic ceiling plywood looking like new wood after we finish.

There are always roofing contractors who will tell homeowners that their entire roof needs replacement. These companies want to tell you to replace your entire roof (boards and all), and these estimates often range anywhere from 10 grand to 20 grand, and routinely don't even solve the problem. Here's why: What happens is a roofing company has you remove the entire roof and replace all the moldy sheathing with new plywood. They don't know or don't tell you about the solutions available today to remediate mold without removing the attic ceiling sheathing. They see mold as a good way to land a big job to unsuspecting homeowners, and don't realize that nearly always the mold is caused by ventilation problems inside the attic. Even though any good roofer should understand an attic should have proper intake (soffit) vents, and proper exhaust vents (ridge or multiple box vents). They tell the homeowner they should replace an entire roof and then often will re-install improper ventilation or won't correct things like a bathroom ceiling vent improperly venting into the attic.

Our process is far more effective and contains more steps than our Massachusetts competitors.

We offer long extended warrantees to protect both your home and your wallet.

Call for a Free Price Quote

888 449 6653

Advanced Mold Detection Services

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