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Identifying Moisture and Mold Sources in Houses

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This checklist is a tool to help evaluate an existing home for moisture problems and sources.

Unwanted moisture in and around homes can lead to structural damage, mold, increased chemical emissions, and health issues. Damp indoor conditions create an environment that supports dustmites, microbial growth, and cockroach and rodent infestations. A 2004 report by the Institute of Medicine indicates that damp indoor spaces are associated with upper respiratory tract symptoms, coughing, wheezing, and asthma symptoms in sensitized persons with asthma.

Moisture problems inside structural components such as walls may be difficult to detect. Condensation and other moisture problems can occur on surfaces or within building component cavities. Moisture can lead to mold growth. Consult a professional house inspector, engineer, architect, or a qualified contractor for a more complete inspection, especially when buying a home.

Items to Evaluate as Sources of Moisture Problems	*No*	*Some*	*Yes*	*If no or some, planned actions to fix the problem?*
Exterior				
Exterior of house is properly maintained and kept free from mold?				
House is not located in a floodplain or in a high water table area?				
House is located on highest part of the lot or site?				
Low spots near the home's foundation are eliminated?				
Soil slopes away from the home's foundation — at least 6 to 12 inches in the first 10 feet or a 5 percent to 10 percent slope?				
Lot slopes away from home directing water off the property?				
Foundation is in good condition with no visible cracks, flaking or spalling, deterioration or bulges?				
Concrete foundation has adequate exterior protection from water?				
*Basement walls and foundation below ground have an exterior sealant				
*Drain tile is present and installed below the top of the footing. (Drain tiles must be *properly* installed to correct problems.)				
Plantings near foundation are not overwatered?				
Water spray from sprinklers is not allowed to hit house or foundation?				
Gutters and down spouts are routinely checked for correct positions, leaks and clogs? Gutter is sloped properly?				
At least one down spout is present per 40 running ft. of gutter trough?				
Down spout extenders extend at least 5 to 6 feet away from the foundation?				

*May be difficult to determine unless known from previous owner or it is a recently built home.

Items to Evaluate as Sources of Moisture Problems	*No*	*Some*	*Yes*	*If no or some, planned actions to fix the problem?*
Little or no wood is in direct contact with the soil around the foundation?				
Cracks and openings around utility entrances, doors and windows, in foundations and other locations are correctly flashed and sealed?				
All roof penetrations and openings are properly flashed and sealed including valleys, and around chimneys and utility penetrations?				
Flashing is installed where roof meets any wall surfaces such as at dormers and porch areas?				
Roof has no signs of cracks, blisters, bubbles, loose or missing shingles, worn or thin shingles?				
Leaking roofs and foundations repaired as soon as the leaks occur?				
Basement window wells are properly drained, with the soil several inches below the window bottom and sloped to the drain? Cover or protect window well if not properly drained.				
Basement windows are properly flashed, weatherstripped and caulked?				
Windows and doors are flashed and weatherstripped and caulked?				
Window weep holes are not sealed shut at bottom?				
Paint is not peeling to bare wood? Peeling paint may indicate a moisture problem at or within wall structure.				
Gaskets have been used where possible (garage doors, sill plates, etc.) to prevent entry of moisture?				
Wood and other types of siding are a minimum of 14 inches above the soil level and 24 inches preferred?				
*Exterior housewrap or drainage plane (under siding) overlaps like shingles to drain the water downward and away from house.				
Interior				
No mold or musty odors are present?				
Relative humidity level in home is kept below 50 percent to 60 percent — an optimum range is between about 30 percent and 50 percent? (Hygrometers measure relative humidity and are found in home and hardware stores and lumberyards.)				
Condensation is controlled on outer walls, pipes and vents through correct insulation methods. Windows have double or triple glazing?				
Moderate indoor temperatures maintained during heating season to avoid condensation?				
Moisture and mold are controlled in shower areas?				
There are no stains or discoloration on the ceiling, walls or floor from moisture leaks?				
There are no leaks around recessed lights, skylights, chimneys and vents?				
Bathroom and range vents exhaust moisture to the outside, not into the attic?				
Drains and drain traps are operating correctly?				
There are no leaks in plumbing pipes to water heater, sinks, toilets/showers, and water conditioning equipment?				

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Items to Evaluate as Sources of Moisture Problems	*No*	*Some*	*Yes*	*If no or some, planned actions to fix the problem?*
Drip pans and dehumidifiers are cleaned frequently?				
When carpeting is cleaned, large fans are used to dry the carpet in 12 to 24 hours to prevent mold growth?				
Firewood is stored outside? (Wood contains moisture.)				
Humidifiers are rarely used?				
Attic shows no signs of mildew or mold?				
Attic shows no signs of water leaks on roof decking and around penetrations through the roof?				
Attic ventilation is adequate for climate, attic size, and structure?				
Crawl Space and Basements				
Basement is dry with no signs of water spots, flood lines or water event?				
Basement does not smell musty or have visible mold?				
Relative humidity level in basement is between 30 percent and 50 percent?				
*There have been no previous basement or crawl space flooding events?				
*Any previous water leaks or entry have been properly corrected and surfaces cleaned and dried? Any cardboard boxes on floor are not damp on the bottom?				
After taping a flexible plastic square to the basement floor, moisture does not collect under the plastic?				
Basement masonry, brick walls or foundation do not show signs of flaking or spalling, or deterioration?				
Crawl space, if present, is dry with no musty odors?				
Exposed soil in crawl space is covered with at least 6 mil. vapor barrier overlapped and extending part way up wall?				
If present, vents in crawl space are opened/closed according to the humidity levels in the space and outside? (Allows dry air in and to keep humid air out according to the climate.)				
Crawl spaces are monitored for humidity levels?				
If present, sump pump is in working condition and area of exposed water is covered?				
Moisture Inside Home is Removed				
Both roof ridgerow baffled vents and eave vents are present to vent attic?				
Vent fans are in place over stove and in the bathroom to vent moisture to the house exterior, not into the attic?				
Occupants use the vent fans to reduce moisture?				
Condensation problems on windows or sills are not evident?				
A dehumidifier, if present, is appropriately sized to handle the volume of air and moisture levels?				
Air is circulated throughout the home to evenly cool or heat rooms and outer walls to minimize condensation on surfaces?				

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Items to Evaluate as Sources of Moisture Problems	*No*	*Some*	*Yes*	*If no or some, planned actions to fix the problem?*
Activities of Residents				
The home is not crowded with too many people for the space?				
Laundry is hung outside to dry, not inside?				
Houseplants are limited?				
Showers are short to reduce excess moisture?				
House is kept clean to reduce food sources for mold? (Paper, dust, dirt, etc., are food sources for mold.)				
Equipment				
Heating and cooling system filters are changed or cleaned according to the manufacturer's directions?				
Mechanical ventilation system is sized correctly and appropriately to manage air intake and exhaust?				
Combustion heating appliances are properly vented to outside?				
Kerosene heaters are not used or are used only in emergencies? (Kerosene heaters give off large amounts of moisture and can create safety hazards.)				
Air conditioners are appropriately sized? Oversizing can cause problems with humidity removal.				
Air conditioner filter, coils, and condensate drain line maintained?				
Clothes dryer is vented to the outside?				
Refrigerator drip pan is cleaned and emptied regularly?				
Dehumidifier tank is emptied regularly or drains directly to a drain?				
Other				
Indoor fountains used only occasionally or not at all?				
Fish aquariums and other open water are covered?				
Water that gets into walls is able to get out in at least one direction?				
No double vapor barriers exist (i.e., vinyl wallpaper and a vapor barrier in wall)?				

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