



Mold in Rental Housing

Town Health Officer Training

Town Health Officer Manual



Chapter 5 Environmental Health

Subchapter 16, Rental Housing Health Code

Section VIII. Structural Elements

- C. Every dwelling, dwelling unit, rooming house or rooming unit shall be maintained to be free from the regular or periodic appearance of standing water or excessive moisture which may result in visible mold growth.

Applicable Rental Housing Health Code



- RHHC, § VI, A(4): Bathrooms must be ventilated to external air by window, airshaft, or ventilation fan that vents to the outside of the building.
- RHHC, § VIII, A: Home must be weather-tight and water-tight.
- RHHC, § VIII, C: Home and units must be free of standing water and excessive moisture. Mold may be an indicator of standing water or excessive moisture.

“Mold” and “Mildew”

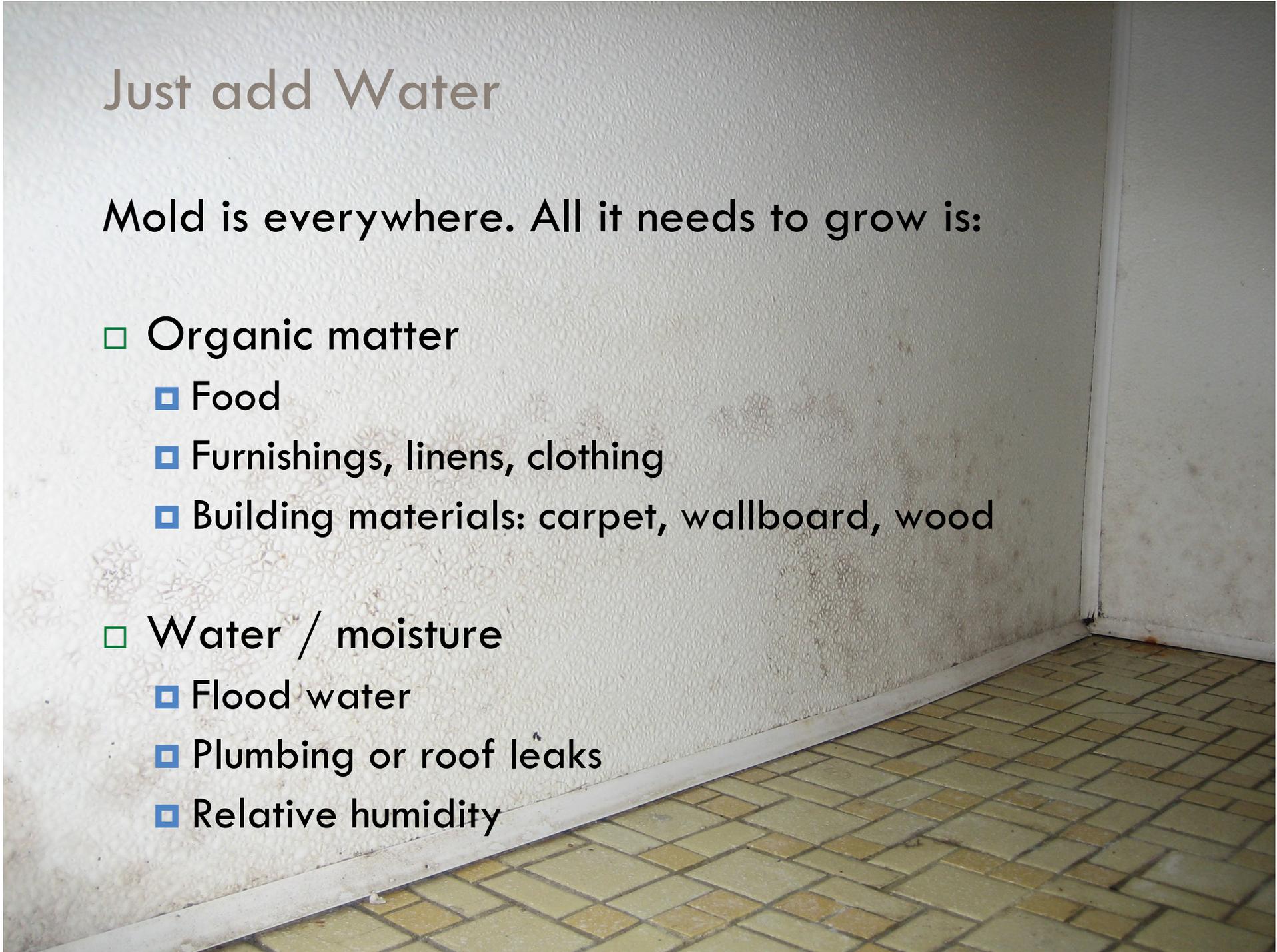
- General terms used to describe fungus
- There are many different types of fungi
- Common throughout nature
- Vary in color and appearance



Just add Water

Mold is everywhere. All it needs to grow is:

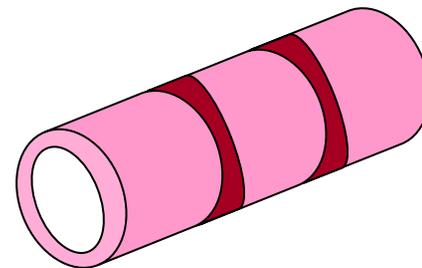
- Organic matter
 - ▣ Food
 - ▣ Furnishings, linens, clothing
 - ▣ Building materials: carpet, wallboard, wood
- Water / moisture
 - ▣ Flood water
 - ▣ Plumbing or roof leaks
 - ▣ Relative humidity



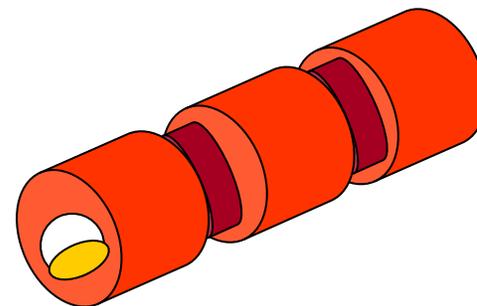
Health Effects of Mold

- These effects depend on the type of mold, and individual sensitivity:
 - ▣ Irritation
 - Eye
 - Nose
 - Throat
 - ▣ Allergic symptoms
 - Runny nose
 - Congestion
 - Sneezing
 - ▣ Asthma exacerbation
 - Constriction of airways
- Fungal infections – rare, but possible
- Refer to physician for all health effects

Normal Airway



Constricted Asthmatic Airway



“Toxic Black Mold”

- “Toxic black mold” doesn’t really mean anything
 - ▣ Many molds can be black
 - ▣ A so-called “black mold” can be present in colors other than black
- “Toxic black mold” usually refers to *Stachybotrys chartarum*
 - ▣ Associated with “toxic health effects” and death due to high amount of publicity and litigation
- Toxicity in residential settings is controversial



Applicable THO Inspection Form Questions

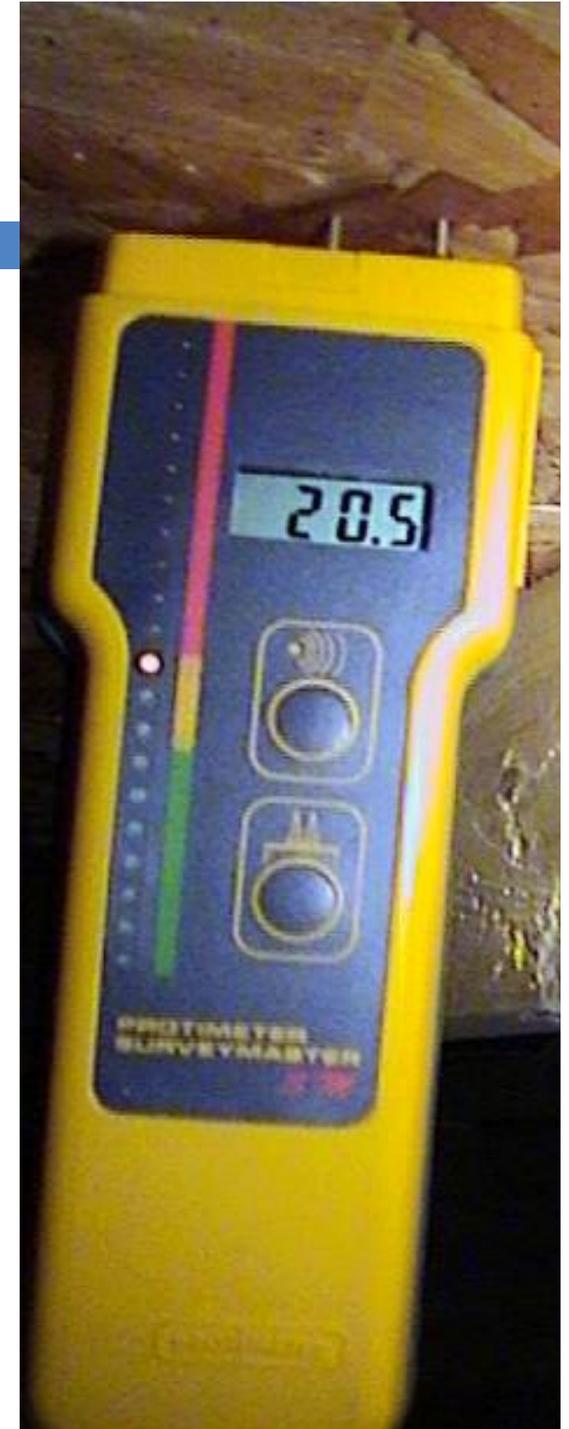


- Question 6.4: bathrooms ventilated?
- Question 6.5: clothing dryers vented to outdoors?
- Question 8.1: weather-tight and watertight?
- Question 8.3: free of standing water, visual evidence of water intrusion or musty smell?
- Question 8.4: free of visible mold or mildew?

Identifying a Mold Problem

Primary strategy: building investigation – not air testing

- Use eyes and nose to identify a mold problem
 - ▣ If you see or smell mold – no need for air testing
- Find the source of water / moisture
 - ▣ Sight, touch, moisture meter
 - ▣ Evidence of water / moisture damage in the absence of visible mold is actionable
- May require increasingly invasive building investigation methods
 - ▣ Example: drilling a test hole to see mold in a suspect wall cavity
 - ▣ Best left to the building owner or their representative



Places to Look for Mold

- ❑ Basements
- ❑ Attics
- ❑ Flooded areas
- ❑ Bathrooms
- ❑ Kitchens
- ❑ Closets
- ❑ Furniture
- ❑ Mattresses
- ❑ Windows and windowsills
- ❑ Carpeting
- ❑ Food storage areas
- ❑ Between furniture and outside walls
- ❑ Around appliances
 - ▣ Refrigerators
 - ▣ Air conditioners
 - ▣ Dehumidifiers



Air Testing is not the First Step



- ❑ Unnecessary if mold is visible
- ❑ Testing includes sampling, culturing and identification – all are complex
- ❑ Results typically show the presence of mold
- ❑ Interpretation is difficult because there are no health standards or laws
- ❑ Scientific testing is often expensive
- ❑ Rarely does mold testing reveal a clear answer

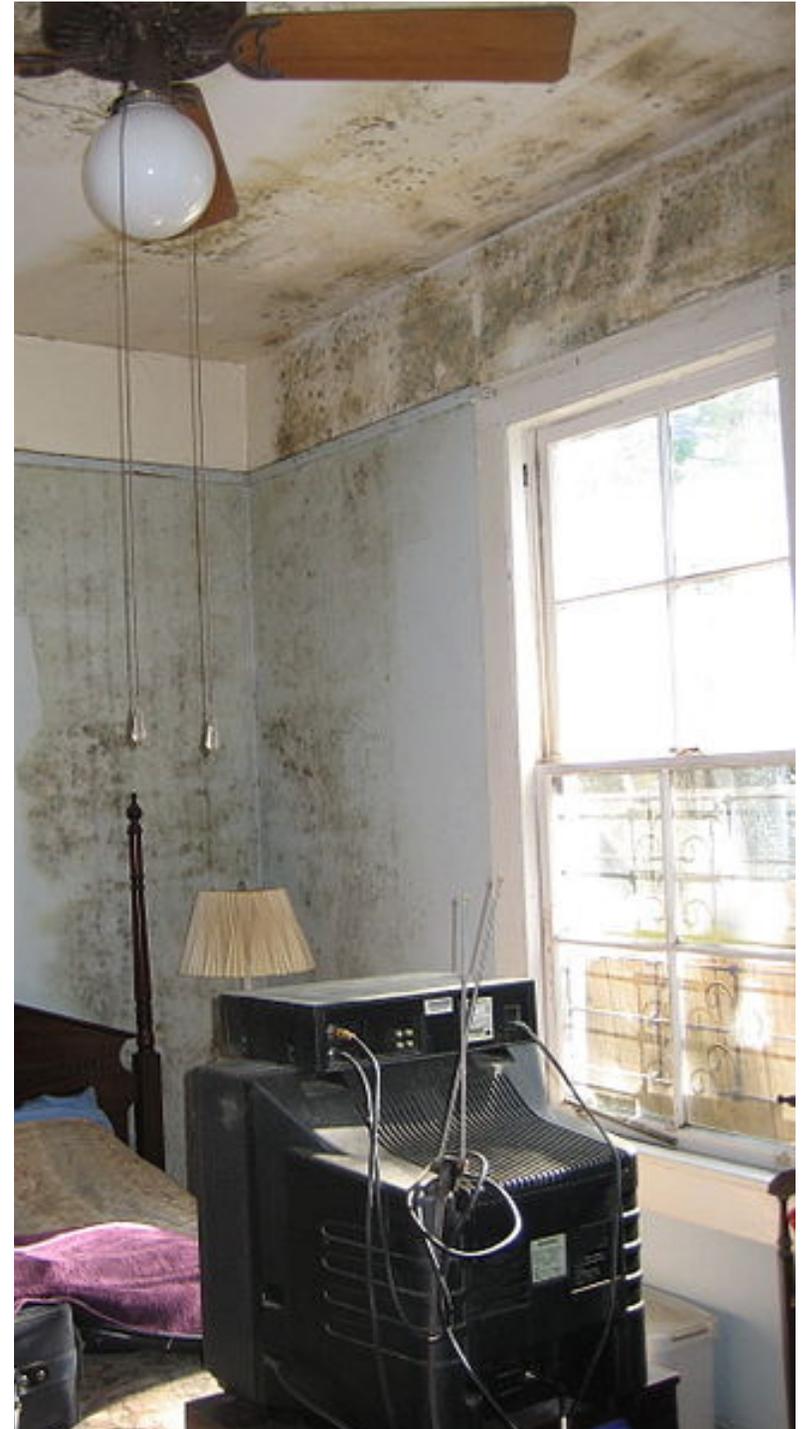
Fixing Mold Problems

- No government license or certification for mold abatement contractors
- Fix water / moisture intrusion
 - ▣ Plumbing
 - ▣ Roof
 - ▣ Windows
 - ▣ Drainage
- Manage indoor relative humidity (RH)
 - ▣ RH should be between 30 – 60%, ideally 50%
- Remove damaged building materials and items
- Clean hard building materials and items



Remove Damaged Soft Building Materials and Items

- If materials / items were not dried within 48 hours of becoming wetted, consider them damaged
 - ▣ Ceiling tiles
 - ▣ Mattresses
 - ▣ Furniture
 - ▣ Carpeting
- Items that can be and are laundered do not need to be discarded
 - ▣ Linens
 - ▣ Clothes



Clean Hard Building Materials and Items

- Hard or nonporous materials and items can be washed to remove mold unless structurally damaged
- There are different opinions on best practices:
 - ▣ EPA: soap and water
 - ▣ CDC: bleach and water
 - ▣ VDH: soap and water
- Biocides are not recommended



Personal Protection

- For small clean-ups (less than 10ft²), which non-professional may attempt, EPA recommends:
 - ▣ N-95 respirator
 - ▣ Gloves
 - ▣ Goggles

- For mold growth greater than 10ft² consult with a professional



THO Response to Mold Calls



Perform rental housing health code inspection:

- Ask occupants or landlord about possible sources of water or moisture
- Perform building investigation first – not air sampling
- Document mold, water or moisture damage if found
 - ▣ Primary role is to identify environmental conditions – water or excessive moisture – in the residence
 - Direct tenant to seek medical advice about their health effects or symptoms related to environmental exposure to mold

THO Inspection Follow-up



- If Rental Housing Health Code violation is found, inform the landlord

- Request voluntary compliance from the landlord
 - ▣ Stop water / moisture intrusion

- Recommend:
 - ▣ Clean hard building materials and items
 - ▣ Remove damaged soft building materials and items

- Re-inspect in 30 days

Questions?

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References



- Storey et al. (2004). “Guidance for Clinicians on the Recognition and Management of Health Effects Related to Mold Exposure and Moisture Indoors” University of Connecticut Health Center
- US EPA (2001). “Mold Remediation in Schools and Commercial Buildings”
- National Center for Healthy Housing