

Repairing Walls from Water Damage to Prevent Mold Growth

Guideline

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Repairing walls from water damage includes repairing or replacing base covings, insulation, and the wall material itself. The scope of repair after water damage has taken place depends upon the extent of damage and the composition of materials used to build the wall.

In general, if the wall material is wallboard or drywall, it should be discarded because it acts like a sponge, drawing water up past the flood level when wet. If the wall material is plaster or paneling, it can often be saved by drying it out properly.

Studs and Sills

Wood studs and sills do not need to be replaced if they are allowed to dry properly. Some contaminants may stay on the studs and sills after the wood dries, but mold growth will not take place if the materials are kept dry. Because the wood studs and sills will be covered by new wallboard or drywall and painted, the contaminants on the wood studs and sills do not pose a risk to human health.

Insulation

If the insulation is made of:

MATERIAL	THEN...
Styrofoam	It may only need to be rinsed
Fiberglass batts	<ul style="list-style-type: none">• If contaminated with organic debris, discard.• If soaked by clean rainwater, remove them so the rest of the wall can dry; then only replace when the batts and the wall are completely dried.
Cellulose (loose or blown-in treated paper)	Remove and replace it. Cellulose can lose its antifungal and fire retardant abilities.

Base Coving

Vinyl or wood base board covings hold the moisture in and allow molds to grow. Remove the coving to allow the walls to dry. The base boards can be cleaned and saved for reuse.

Wallcovering

Vinyl wallcovering seals the wall and prevents drying, promoting the growth of mold and mildew. Therefore, remove and discard all wallcovering that got wet.

NOTE: If vinyl wallcovering is loose on the bottom, you may be able to save it by pulling it off the wall up to the flood level. Clean and reapply it after everything dries.

Concrete Block

The cavities in a concrete block wall will drain on their own. The water will not damage the concrete like it will wood, wallboard, or other porous materials.

Drying the Wall Cavity

The following equipment is needed to dry the wall cavity properly:

- Cavity Drying Fan
- Tubing to attach to Cavity Drying Fan and drilled holes in the wall
- Moisture Meter to check effectiveness of drying efforts

To dry the wall cavity

1. Check for water in the wall cavity, and if needed drain the water from the wall cavity, using one of the following procedures:

NOTE: If the damaged wall is an interior wall, complete the steps to both sides of the wall. If the damaged wall is an exterior wall, complete the steps for the interior side of the wall.

MATERIAL	INSTRUCTIONS
Wallboard or drywall	<ol style="list-style-type: none">1. Take off the baseboard.2. Stick an awl or knife into the wall about 2 inches above the floor.3. Does water drip out? If YES, are you replacing the wall?<ol style="list-style-type: none">a. If YES, use a hammer to knock out a hole in the wall large enough to let the water to drain freely.b. If NO, use a hand or cordless drill or saw (to avoid electrical shock) to drill or cut a hole large enough to allow water to drain freely.
Plaster	<ol style="list-style-type: none">1. Take off the baseboard.2. Use a hand or cordless drill (to avoid shock.) to drill a hole above the sill plate, but low enough so they can be covered by the base board after the wall dries out, to drain the water. <p>NOTE: Do not use a hammer or chisel on plaster because the plaster could shatter.</p>
Paneling	<ol style="list-style-type: none">1. Pry the bottom of each panel away from the wall.2. Use something to hold the bottom away from the sill so the cavities can drain and dry out.

2. Do you have metal sill plates (which acts as a trough at the bottom of the wall cavity)?

- If YES, drill a hole at floor level to drain the water using a hand or cordless drill. Repeat the process between the studs in the wall. Depending on the spacing between studs, make a hole every 16" or every 24".

NOTE: Be aware of the locations of wiring within the wall which are usually at the same height as your electrical outlets.

- If NO, then go to the next step.

3. If the insulation is wet, remove the wallboard, plaster, or paneling and take out all the insulation.

Repairing the Wall

1. Remove wallboard to at least the flood level.

NOTE: Wallboard or drywall becomes fragile and falls apart when bumped if it stays wet for too long.

2. Use the following table to determine how to repair a water-soaked wall:

IF THE WALL IS MADE OF...	AND...	THEN...
Wallboard, drywall, or paneling	Most of it is soaked by contaminated water	Remove all the wallboard, drywall, or paneling and replace it.
Wallboard, drywall, or paneling	Most of it is soaked by clean rainwater or lawn runoff	Cut a 4- to 12-inch-high section from the bottom and top of the walls to create a "chimney effect" of air movement for faster drying.
Wallboard, drywall, or paneling	It is soaked AT LEAST four feet above the floor	Remove all the wallboard, drywall, or paneling and replace it.
Wallboard, drywall, or paneling	It is soaked LESS than four feet high	Remove the lower four feet of wallboard, drywall, or paneling and fill the gap with 4' x 8' sheets installed sideways.
Plaster	It is clean and in good shape	Drill or cut ventilating holes in each wall cavity. Place holes low enough so they will be covered by the baseboard after the wall dries out.
Plaster	It is separating from the wood or metal laths as it dries	Remove all the plaster and replace it.

Wood

If allowed to dry naturally, wood will generally regain its original shape. However, different layers of laminated wood, such as plywood, may dry at different rates, causing the layers to separate.

If a basement was flooded over the first floor, remove finished basement ceilings, or cut or drill holes between all the joists to allow circulation. Don't cut or drill near electric lines or pipes.

Information From: American Red Cross/Federal Emergency Management Agency - Disaster Services - Repairing Your Flooded Home- Step 4 & University of Wisconsin Extension Publications - Flood Damaged Walls, Ceilings and Floors