

PATH FORWARD: PHASE II

Understanding the Rebuild Process for Harvey-Flooded Homes

FBC, October 11, 2017

PREPARATION FOR RECONSTRUCTION: DRYING OUT

DRYING OUT: The BIG Question: Do I need to be certified mold-free?

Normal mold ecology – it's Houston; there are mold spores under good circumstances.

Typically when houses fail a mold test they are placed on a mold registry until provided with a clearance letter from a mold remediator. The state has passed a moratorium on getting put on the mold registry. But if you fail you will need to eventually pass in order to stay off of the mold registry.

Debatable if there is truly anyone who can honestly certify you mold-free. Not even recommended....

Unless you have a FEMA inspector who specifically requires a mold-free certification. In that case, you pretty much must do it. But FEMA has not been requiring it across the board.

If not required by your inspector, we recommend being certified dry instead. Keeping good historical records of drying process and decontamination will go further for future reassurance during resell than anything.

DIY observations: Do I see any mold? Is the musty smell gone? Do people in this environment experience symptoms (headaches, respiratory, etc.). These are truly the best "tests" of mold-free (see NY State Mold Remediation Protocols).

DRYING OUT: What's the Goal?

- To ensure re-construction can begin without trapping moisture that would generate mold, warp materials, or compromise the integrity of the structure.
- To set up a historical record for future reassurance.

THIS IS THE FOUNDATIONAL STEP for everything you do from here on....

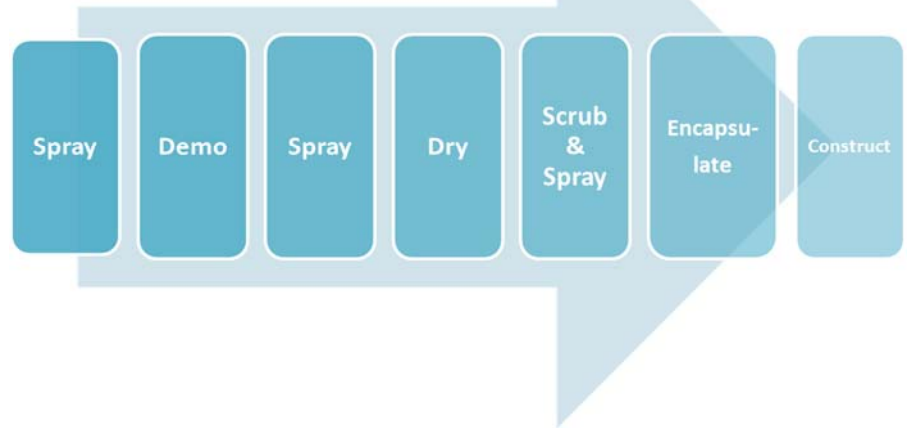
What's the Process?

- bringing in several blowers & dehumidifiers for several days to weeks.
- Target for base plate & studs: 10%
- Insure all leaks are fixed and all moldy surfaces removed first (2' from mold)

- Do not lower temperature below 70 degrees F (to avoid condensation).

Step1: Am I moisture-free?
(see Reconstruction Readiness attachment).

- Five days after you are stated dry you review the home (bounce back).



Use a Moisture Monitor.

Log & photograph the readings (daily is ideal).

Studs: at/below 10%. Focus on point where water entered/left the home.

Expect bounce (back up to 15%)once drying equipment is removed.

Flooring contractor should take core sample of concrete.

How long will it take?

- With proper equipment including working A/C, industrial fans, dehumidifiers: Between 1-3 weeks
- Enlist a drying specialist or purchase your equipment now as there may be a wait in queue.

What's a reasonable cost?

\$2 per square foot for drying only; \$2.50 if including spraying for mold.

This usually includes 5 days drying (although 5 days may not be enough).

Beware of companies charging well beyond or removing equipment before correct moisture readings are met.

SPECIAL CONSIDERATIONS

DIY Considerations

Typically 4-5 industrial fans pointed at angle to wall to move air, and 2-3 commercial dehumidifiers.

Take drying log including photos of the meter readings; goal .5-1% per day. This record will be helpful if you try to resell.

Dehumidifier will need drainage via hose to sink, etc.

If outsource cost will be >\$5K, consider DIY. But don't skimp on the equipment.

MOISTURE BARRIER CONSIDERATIONS

Applies to homes with brick exterior

Surface just behind brick: Moisture Barrier, Gypsum

Often was demo'd in parts or completely. Without it, studs will be exposed to rot.

Difficult to replace without removing brick entirely.

The "fix": See Appendix 1.

WIRING CONSIDERATIONS



Wiring needs to be replaced a minimum of 2' above the affected area.

Houses older than 1987 have a wax paper insert that sucks up the water like a straw

Houses after 1987 tend to be not as bad, but both need to be replaced above the affected area.

Otherwise becomes a fire hazard

Harvey flooded homes will need to come up to code including Arc Fault Breakers.

TILE/GROUT CONSIDERATIONS

Grout with prolonged exposure to water or contaminants will soak them up.

Tile is applied with "grooves" underneath where water & contaminants will become trapped.

Movement of water keeps one side wetter.

Flooded tile should be removed (just as other flooring).



CONTRACTOR LIABILITY WAIVER

Expect your contractor to ask for a liability waiver to release him/her from future mold issues. This is normal practice.

PREPARATION FOR RECONSTRUCTION: DECONTAMINATING

Products recommended in SECOND STEP:

Spray mildewcides: MICROBAN or SHOCKWAVE. Comes concentrated; dilute & spray.

Encapsulate: FOSTER'S 40-50 Mold Resistant Coating

Optional: Enlist an industrial hygienist to certify air cleanliness.

ENLISTING A CONTRACTOR

Preventing fraud

- Hire insured, local contractors; get copies of certificate & Tx Driver's License
- Get multiple estimates (good goal: 3)
- Get referrals from friends/family
- All estimates on "paper"
- Have contract reviewed
- Keep copies of SIGNED contracts
- Avoid door-to-door guys

Other Red Flags to watch out for:

- Check out his truck – is it a mess with papers crammed around?
- Did he fail to take detailed notes as you walked through?
- Is he quoting numbers too early
- Not local
- "Creep factor"

Bids & estimates should include:

- Scope of work after a thorough walk-thru
- List of intended materials
- Timeline of work
- Break-down of materials costs & labor costs
- Payment structure
- 3 references from recent clients

How payment should look:

- Paper trail w credit card or check
- No cash payments...ever
- Progress billing: Pay as work is completed upon your approval of work
- May request a down-payment (10% or less is a good target)

- Never pay full amount up front
- Fixed Cost v. Cost Plus (Fixed cost has much less litigation).

Include in the contract:

- Scope list of items to be done
- Home inspection by 3rd party before final payment (you pay)
- Release of lien
- Payment structure
- Warranty for their work (typically 1 year bumper-to-bumper)

What Permits will be needed?

- Reconstruction – Not typically needed for this type of reconstruction/remodel post-Harvey.
- Electrical – Yes, needed if rewiring is needed.
- Plumbing – Yes, only if repiping.
- HVAC – Yes, if replacing bad unit, etc.

DIY Building or General Contracting

- Generally don't recommend DIY rebuild as it requires specialized skills and at time, licenses (i.e., for electrical, plumbing, HVAC).
- DIY General Contracting is a step better, but has its own challenges including understand the scope of work for each trade and getting access to sub-contractors in a busy market. Good GC's will have loyal trade base that will not want to be diverted for a one-off job.

If you decide to DIY GC, the basic flow of construction is:

- Drying Out/Decontamination
- Wiring
- Insulation
- Sheetrock
- Trim & Cabinet
- Paint
- Countertops
- Tile
- Fixtures & lighting
- Exterior doors
- Floors
- Cleaning

BUILDING VALUE IN RECOVERY CONSTRUCTION

- Remodel well...don't give in to desperation.
- Increasing resale value without wasting time & money
- Avoiding the biggest time waster: getting hung up on homeowner detail decisions ("which knob do I want??")

- Resource Idea: library of kitchen plans with palettes & sources
- Build a HOUZZ idea book

Special Design Consideration: FEMA and the 50% Rule (applicable only if you are in the 100-year flood plain).

DECIDING TO SELL vs. MOVE BACK IN

- When to sell before rebuilding
- When to move back in short or long-term
- What's likely to happen to the market in Harvey-flooded West Houston/Katy neighborhoods
- How long is optimal to wait to list?

ADDITIONAL RESOURCES

Home construction advice:

David Gordon, GMB, CGP
owner, Whitestone Builders
Chair, GHBA Custom Builder Council
dgordon@whitestonebuilders.com
832-274-3848

Building Science Expertise:

Toner Kersting
toner@snyderenergyservices.com
(as part of his process, Toner enlists the aid of industrial hygiene consultants)

Structural Engineering:

Mike Hulbert, P.E.
licensed structural engineer (TX PE #76981)
Senior Engineer/Vice President
BGA Engineers, Inc.
mike.Hulbert@bgaeng.com
Cell (281) 615-7519
Work (713) 329-9922

Relief Steps & Advice for Homeowners:

www.SBPUSA.org
Has everything from working with FEMA to contractor checklists.

Drying Company:

Pinnacle Disaster & Recovery Services
12507 Woodworth Dr, Suite 400, Cypress, TX 77429
Pinnacledrestorationsvc.com

Reasonable local pricing on Fosters & Microban

Jon-Don

www.jondon.com/hurricane-restoration-support

14310 Interdrive E, Houston, TX 77032

800-556-6366

Industrial Hygiene Consultants

A&B Labs

10100 East Fwy Ste 100, Houston, TX 77029-1919

(713) 453-6060

Ablabs.com

Official Notes on Flood Damage Repair in the Floodplain:

www.publicworks.hourstontx.gov/notices/flood-damage-repair.html

Reporting Harvey damage for Harris County Tax Office purposes:

www.tax.co.harris.tx.us/weather/harveyresources

713-812-5805