

Entering owner occupied homes

Prioritizing health and safety, following regulations and policies.



Webinar Agenda

compliance around health and safety requirements

Best Practices and Considerations

radon

Lead

Health and Safety

MORE IMPORTANT

MORE URGENT

1 DO FIRST

SERIOUS IMMEDIATE HAZARD, RISK, PERIL, OR DANGER
IMMINENT THREAT TO SAFETY, HEALTH, SECURITY

EXAMPLES:

Carbon monoxide or gas leak; combustion appliance defects
Water issues: roof, flashing, grading, gutters, plumbing leaks
Inoperable mechanical systems, appliances, or devices
Electrical defects, deficiencies, code violations
Inoperative plumbing: water supply, waste, toilet, tub, sink
Failed or failing structural components
Root causes of major mold problems; often moisture-related
Unsecured entry; unusable or dangerous ingress and egress
Major allergy & asthma triggers with potential to cause illness
Accessibility upgrades to enter, traverse, and utilize rooms

LESS IMPORTANT

3 DO LATER OR DELEGATE

LOWER RISK OF SAFETY OR HEALTH THREAT
MINOR USABILITY OR LIVABILITY IMPROVEMENTS

EXAMPLES:

Junk or debris in yard or house; hoarding
Nuisance or potential allergy and asthma triggers
Repair/replacement of damaged window or door units
Inoperable kitchen or bathroom fan; not vented to outdoors
Missing or disconnected dryer venting; not vented outdoors
Defective porch, steps, railings, grab bars
Siding replacement as part of weather-proofing
Reducing ownership costs: weatherization, air-sealing
Pooling outdoor water near house; gutter repair/installation
Potential asbestos exposure

LESS URGENT

2 DEVELOP A PLAN

POTENTIAL SAFETY/HEALTH THREAT, DANGER, OR FAILURE
CRITICAL USABILITY OR LIVABILITY IMPROVEMENT

EXAMPLES:

Lead hazards, especially if children are present
Trip and fall hazards
No mechanical bathroom or kitchen exhaust system
Indoor air quality concerns
Pests, infestation, frass, other allergy & asthma triggers
Minor electrical faults or defects
Minor dampness, wetness, plumbing leaks
Accessibility improvements for ease of use
Repair siding and exterior components to keep weather out
Failing foundation, groundwater intrusion

4 DEFER OR DISREGARD

NO RISK REDUCTION; AESTHETIC IMPROVEMENTS ONLY
NO EFFECT ON EFFICIENCY, USABILITY, OR LIVABILITY

EXAMPLES:

If no higher priorities exist, this may include:
Exterior painting
Deferred maintenance tasks
Landscaping
Interior remodeling, painting, cabinets, countertops
Replacement of functioning or serviceable windows
Siding replacement for aesthetic purposes
Porch, deck, or patio improvements if currently serviceable
Additions or other non-essential projects
Other as approved

Health and Safety



Health and Safety



Carbon Monoxide Poisoning Symptoms

Chest pain

Headache

Vomiting

Dizziness

Upset stomach

Weakness

The illustration shows a woman in a blue and white striped shirt standing in a kitchen. To her right are several icons representing symptoms: a person holding their chest, a head with a lightning bolt, a toilet, a dizziness symbol, a stomach with a lightning bolt, and a battery icon.



Health and Safety



Best Practices / considerations

Scope of work / assessments

Homeowner partnership agreement

Subcontractor contracts / document collecting
/ bidding / permits / code

Environmental Review

ASSESSING HOME, SCOPE OF WORK



- Whole home walk through
- Prioritize based on health and safety
- Lead and radon testing
- Scope of work – DETAILS
- Contractors

- SAFETY!



HOMEOWNER PARTERSHIP AGREEMENTS



- Signed contract of intended work to be done
- Terms
- Partnership agreements



CONTRACTOR/SUBCONTRACTOR CONTRACTS



- Bids
- Paperwork to collect
 - Licensed and insured
- Set contract based on scope of work – addendums
- Permits/codes



ENVIRONMENTAL REVIEW PROCESS



- Flood Insurance
- Lead and radon test results
- SHPO
- Year build
- Scope of work
- Mapping – noise, flood, contamination, transportation, etc
- timeline



radon

WHAT IS RADON ?



- Radioactive gas
- #1 cause of lung cancer
- Testing process
- Mitigation measures

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LEAD & OTHER HAZARDS IN HEALTHY HOMES FRAMEWORK

JENNIFER SHUTTS

TINA WAHL

THE EIGHT PRINCIPLES OF A HEALTHY HOME

HUD'S OFFICE OF LEAD HAZARD CONTROL AND HEALTHY HOMES DEFINES EIGHT PRINCIPLES OF A HEALTHY HOME

- 1. Keep it dry**
- 2. Keep it clean**
- 3. Keep it safe**
- 4. Keep it well ventilated**
- 5. Keep it pest-free**
- 6. Keep it contaminant-free**
- 7. Keep it well maintained**
- 8. Keep it thermally controlled**

The Eight Principles of a Healthy Home

HUD's Office of Lead Hazard Control and Healthy Homes defines [Eight Principles of a Healthy Home](#).

1 Keep it dry:

Prevent water from entering the home through leaks in roofing systems, prevent rainwater from entering the home due to poor drainage, and check interior plumbing for any leaking.



2 Keep it clean:

Control the source of dust and contaminants, by creating smooth and cleanable surfaces, reducing clutter, and using effective wet-cleaning methods.



3 Keep it safe:

Store poisons out of the reach of children and properly label. Secure loose rugs and keep children's play areas free from hard or sharp surfaces. Install smoke and carbon monoxide detectors and keep fire extinguishers on hand.



4 Keep it well ventilated:

Ventilate bathrooms and kitchens and use whole-house ventilation for supplying fresh air to reduce the concentration of contaminants in the home.



5 Keep it pest-free:

All pests look for food, water, and shelter. Seal cracks and openings throughout the home; store food in pest-resistant containers. If needed, use sticky-traps and baits in closed containers, along with least-toxic pesticides such as boric acid powder.



6 Keep it contaminant-free:

Reduce lead-related hazards in pre-1978 homes by fixing deteriorated paint and keeping floors and window areas clean using a wet-cleaning approach. Test the home for radon, a naturally occurring dangerous gas that enters homes through soil, crawlspaces, and foundation cracks. Install a radon removal system if levels above the EPA action level are detected.



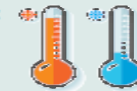
7 Keep it well maintained:

Inspect, clean, and repair the home routinely. Take care of minor repairs and problems before they become large repairs and problems.



8 Keep it thermally controlled:

Houses that do not maintain adequate temperatures may place the safety of residents at increased risk from exposure to extreme cold or heat.



<https://www.hud.gov/sites/dfiles/HH/documents/8-Principles-Healthy-Home.pdf>

PERSONAL HEALTH IS TIED TO HOME HEALTH

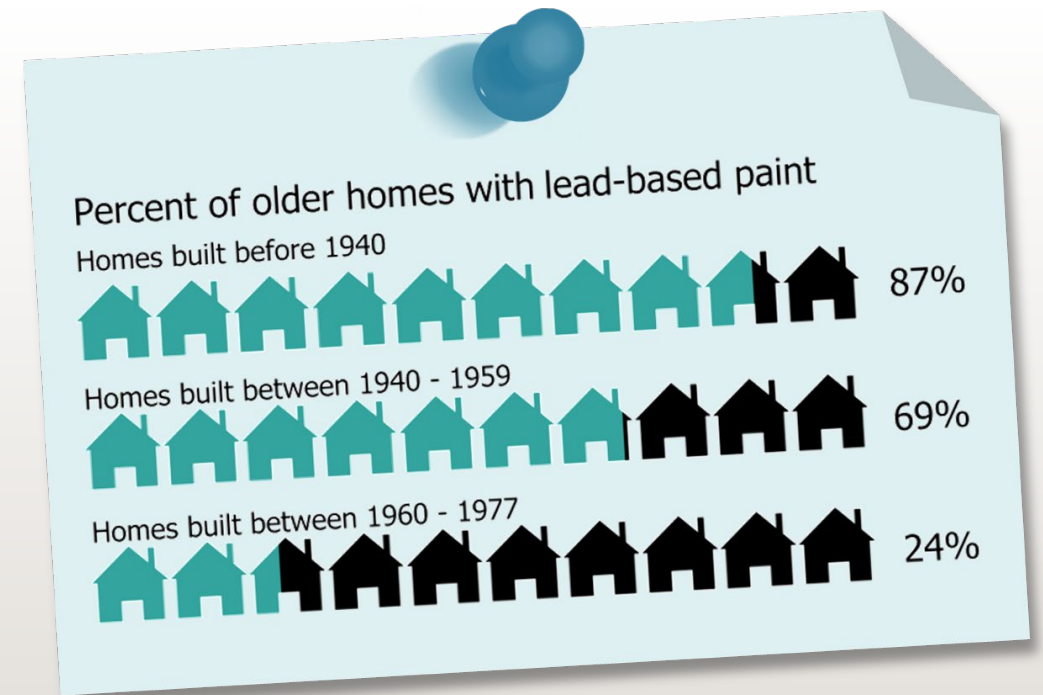
- Americans spend about 90% of their times indoors with 2/3 of that in the home.
- In the U.S., the leading causes of death , injury and illness are all associated with hazards in the home including falls, fires, drownings and lead exposure to name a few.
- The community and surrounding neighborhoods also contribute to a healthy home.
- In 2015, Medicaid outlined reimbursement options or housing related services.
- Some health insurers are increasingly willing to pay for healthy home measures when they reduce patient spends.
- Housing is a well recognized Social Determinant of Health.

MICHIGAN WAS ONE OF HUD'S 1ST HEALTHY HOMES GRANTEES

- In 2005, the Michigan Department of Health and Human Services (MDHHS) became a new Healthy Homes Production grantee.
- 29 HUD Healthy Home eligible costs; provides flexibility.
- MDHHS decreased asthma hospitalizations by 50% and ER visits by 70% in their cohort of families.
- The department is an available resource to you and your teams with lessons learned.
- HUD's funding for Healthy Homes work is growing and will be an opportunity long into the future.

THE PRESENCE OF LEAD CAN THREATEN A HEALTHY HOME

- Lead is a highly toxic metal that was commonly used in:
 - Household paint (banned in 1978)
 - Gasoline (banned in 1995)
 - Plumbing pipes and fixtures
- Homes built before 1978 are more likely to have lead-based paint.



WHY SHOULD I BE CONCERNED?

- Lead can cause problems with:
 - Learning
 - Behavior
 - Hearing
 - Growth
 - Speech
 - Development of nervous system
- Children under 6 and pregnant persons are at most risk.
- Potential sources can be household items, peeling and chipping paint, jobs, hobbies, soil and drinking water.

WHAT CAN I DO?

- Learn more about lead safe cleaning and work methods.
- Identify whether there is lead-based paint or lead-based paint hazards in pre-1978 housing.
 - Lead Inspection
 - Lead Risk Assessment
 - Lead Inspection/Risk Assessment
- Apply to a lead services program
 - Lead Safe Home Program
 - Local Lead Services Development Unit
 - Other communities with HUD grants
 - Lead Prevention Fund

WHAT IS A LEAD INSPECTION/RISK ASSESSMENT

- Lead Inspection:
 - A surface-by-surface investigation in target housing or child occupied facility to determine the presence of lead-based paint.
- Lead Risk Assessment:
 - An onsite investigation in target housing or child occupied facility to determine the existence, nature, severity and location of a lead-based paint hazard.
- Lead Inspection/Risk Assessment:
 - Combination of both and usually the most protective option to be conducted in target housing.
- Lead Hazard Control Screens are not authorized in Michigan.

WHAT IS A LEAD INSPECTION/RISK ASSESSMENT

- Report must be provided to the building owner and person who funded the service, if different from the owner; professional has 20 business days once sample results are received to provide the finalized report.
- Individuals must be certified to complete a lead inspection or risk assessment.
 - Lead Inspector certification
 - Lead Inspector/Risk Assessor certification
 - Michigan does not have a Risk Assessor specific certification, both disciplines are combined.

REPORT CONTENTS

- Title Page / Table of Contents
- Plain Language Conclusion Section
 - Should be understandable to the reader the first time reading it.
 - Simplified identification of lead hazards, near front of report.
 - Details lead hazard control options, priority/severity in a tabular format.

Lead Testing

RESULTS & RECOMMENDATIONS

The table below details all of the lead-hazards found in your home.

TABLE 1: ALL LEAD-HAZARDS				
COMPONENT & LOCATION OF HAZARD	SEVERITY*	PRIORITY**	ABATEMENT OPTIONS	INTERIM CONTROL OPTIONS
Ext. Door Stop (Impact Hazard)-Entry 1 Side A	1	1	1) Enclose with a rigid material and seal, or 2) Remove and replace with new materials, or 3) Strip bare to the substrate and repaint.	1) Wet plane impact surfaces, wet scrape/sand loose paint, re-paint, and install weatherstripping to reduce wear.
Door Lintels (Deteriorated LBP Hazards)- Enclosed Porch 6 Sides A1 & A2	3	3	1) Enclose with a rigid material and seal, or 2) Properly prepare surfaces and apply an approved encapsulant, or 3) Strip bare to the substrate and repaint.	1) Wet scrape loose paint & re-paint.
Door Casing (Deteriorated LBP Hazards)- Enclosed Porch 6 Side A2	3	3	1) Enclose with a rigid material and seal, or 2) Remove and replace with new materials, or 3) Properly prepare surfaces and apply an approved encapsulant, or 4) Strip bare to the substrate and repaint.	1) Wet scrape loose paint & re-paint.

REPORT CONTENTS

- All positive paint results.

Positive Lead-Paint Results
All paint testing results in Appendix D.

TABLE 2: POSITIVE LEAD-PAINT RESULTS

READING #	MG/CM ²	RESULT	COMPONENTS	SIDE	SIDE #	COLOR	CONDITION	SUBSTRATE	ROOM TYPE	ROOM #	FLOOR	COND CAUSE	FRIC-IMP	TEETH
4	11.3	Positive	Door Stop	A		White	Deteriorated	Wood	Entry	1	1st	Weather	Yes	No
90	9.2	Positive	Door Lintel	A	1	Green	Deteriorated	Metal	Enclosed Porch	6	1st	Renovation	No	No
91	6.3	Positive	Door Lintel	A	2	Green	Deteriorated	Metal	Enclosed Porch	6	1st	Renovation	No	No
92	11.9	Positive	Door Casing	A	2	Green	Deteriorated	Wood	Enclosed Porch	6	1st	Renovation	No	No
94	6.3	Positive	Milk Chute	A		White	Deteriorated	Metal	Enclosed	6	1st	Impact	Yes	No

REPORT CONTENTS

- Lead dust testing, location, results

Dust Wipe Sample Results

TABLE 3: DUST WIPE SAMPLE RESULTS

SAMPLE #	ROOM/WIPE LOCATION	SURFACE TESTED	LEAD HAZARD?	LAB RESULT ($\mu\text{g}/\text{ft}^2$)
		HF Hard Floor CF Carpet Floor T Trough S Stool/Sill EPF Ext. Porch Floor		
FB1	Field Blank	N/A	No	BRL**
1	Living 2	HF	No	<5.00
2	Living 2 B	T	No	44.75
3	Dining 3	HF	No	<5.00
4	Dining 3 A	S	No	<5.00

REPORT CONTENTS

- Soil sample locations and results

Soil Sample Results

Soil samples not collected due to snow or frozen ground.

Soil samples not collected due to no bare soil present.

If either box above is checked, soil sample results will not be included because soil samples were not taken.

TABLE 4: SOIL SAMPLE RESULTS

SAMPLE #	LOCATION OF BARE SOIL AREA	APPROXIMATE AREA IN SQUARE-FEET (FT²)	LEAD HAZARD?	LAB RESULT IN PARTS MILLION (ppm)
SS1	Urban Background Sample	30	No	46.28
SS2	Yard A	120	No	89.06
SS3	House Drip Line Side A	24	No	130.52

REPORT CONTENTS

- Other surface sample results
- Surfaces unable to test

Other Surface Sample Results

The table below details all surfaces that do not have paint that were tested. Testing these surfaces can help find other sources of lead-exposure. These surfaces are not required to be tested.

TABLE 5: OTHER SURFACE SAMPLE RESULTS

SURFACE/ITEM DESCRIPTION	LOCATION	MATERIAL	RESULT (mg/cm ²)
N/A			

*Items listed above were tested using an XRF. The results are limited because the surfaces tested do not comply with the devices testing ability. **Positive lead results are in bold.** These items may be a potential source of lead exposure. [mg/cm² = milligrams per square centimeter]*

SURFACES UNABLE TO BE TESTED

A lead investigation requires testing all painted surfaces. Some painted surfaces in your home may be out of reach. These surfaces are not tested. Surfaces out of reach that are not tested are assumed to contain lead-based paint. If the paint looks deteriorated, the surface is assumed a lead-based paint hazard. The table below details all of the untested painted surfaces. It also details why the surface was not tested.

TABLE 6: SURFACES UNABLE TO TEST

ROOM	COMPONENT	REASON NOT TESTED
PORCH 6 SIDE A 2	DOOR SYSTEM	BOARDED UP AND SEALED

HUD reporting limits for positive XRF results are ≥ 1.0 mg/cm² (milligrams per square centimeter) for painted surfaces.

REPORT CONTENTS

- Potential hazards

POTENTIAL HAZARDS

Lead can exist in your home and not be a hazard. The table below details all surfaces found to contain lead but are not current hazards. Please make a note of these surfaces and remember to monitor them for changes. Any changes could make the surface a lead-hazard, which will alter severity and priority levels and require lead hazard control options. Refer to Appendix C-3 for ways to monitor.

TABLE 7: POTENTIAL HAZARDS

READING #	MG/CM ²	RESULT	COMPONENTS	SIDE	SIDE #	COLOR	CONDITION	SUBSTRATE	ROOM TYPE	ROOM #	FLOOR	COND CAUSE	FRIC-IMP	TEETH
324	5.8	Positive	Vent	D		Black	INTACT	Metal	Exterior House	Ext.	1st			

HUD reporting limits for positive XRF results are ≥ 1.0 mg/cm² (milligrams per square centimeter) for painted surfaces.

REPORT CONTENTS

- Occupant questionnaire:
 - Determines family activities in the home and identified places or concern that may require additional testing.
- Questions:
 - Family use patterns
 - Other household risk factors
 - Frequent areas the child visits (if applicable)
 - Child behavior risk factors
 - Dietary risk factors
 - Occupational/hobby risk factors
 - Water questions as needed

REPORT CONTENTS



General property description

For example, single family home with a basement, detached garage on a corner lot.



Building Condition Questionnaire

Determines whether renovations occurred or lead-based paint activities.

Demolition of nearby buildings or renovation

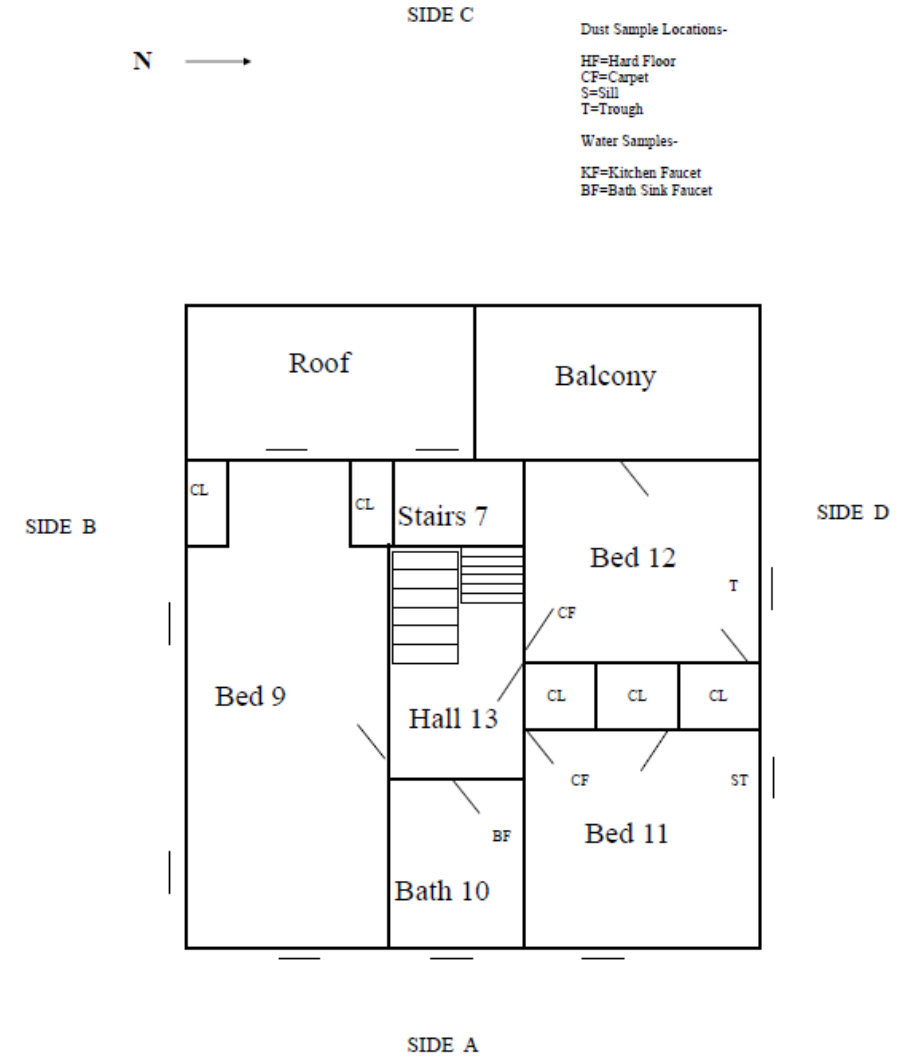
Review exterior building condition; roof missing, large cracks, foundation issues.

Review interior building condition for water damage, deteriorated paint and other notable conditions.

REPORT CONTENTS

- Site sketch/map
 - Illustrates the following:
 - Rooms in the home
 - Levels of the home
 - Basement
 - Window/door locations
 - Entryways
 - Property layout (aerial view)

2nd FLOOR



REPORT CONTENTS

- All XRF results (positive and negative)
- Visual assessment for XRF results
- Certified professional's name and signature
- Monitoring and reevaluation schedule
- Lead education
- Laboratory results and chain of custody forms

RADON AND MOLD ON LEAD PROJECTS

Both are addressed utilizing healthy homes funding, which is limited.

- MDHHS works with the Michigan Indoor Radon program.
- Michigan Indoor Radon Specialist provides radon kits to MDHHS; MDHHS staff complete the radon testing when conducting the lead inspection/risk assessment.
- Mold
 - If the Inspector/Risk Assessor identifies mold, MDHHS has funding to remediate if necessary.
 - Roof leaks, etc.

WORKFORCE INITIATIVES

- Scholarship Program
- Incentive Program
- Environmental Protection Agency Renovation, Repair and Painting (RRP) Outreach
- Multi-project contract
- Coaching & Mentoring
- High schools
- MiWorks
- Hiring Portal

QUESTIONS/CONTACT

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