

2023 WAP DOE Health & Safety Plan

POLICY SUBMITTED WITH PLAN

1.0 – GENERAL INFORMATION

Grantees are encouraged to enter additional information here that does not fit neatly in one of the other sections of this document.

2.0 – BUDGETING

Grantees are encouraged to budget Health & Safety (H&S) costs as a separate category and, thereby, exclude such costs from the average cost per unit cost (ACPU) limitation. This separate category also allows these costs to be isolated from energy efficiency costs in program evaluations. Grantees are reminded that, if H&S costs are budgeted and reported under the program operations category rather than the H&S category, the related H&S costs must be included in the calculation of the ACPU and cost-justified through the approved energy audit.

Select which option is used below

Separate Health and Safety Budget

Contained in Program Operations

3.0 – HEALTH AND SAFETY EXPENDITURE LIMITS

Pursuant to [10 CFR 440.16\(h\)](#), Grantees must set H&S expenditure limits for their Program, providing justification by explaining the basis for setting these limits and providing related historical experience.

The Limit on Health & Safety expenditures is 25% of the Base Operations from DOE funding.

Health & Safety Measure Matrix			
Measure	Cost	Frequency	Formula Cost
Heating System Replacement	\$ 4,144.97	10.0%	\$ 414.50
Heating System Repair	\$ 518.12	40.0%	\$ 207.25
Water Heater Replacement	\$ 1,776.42	20.0%	\$ 355.28
Water Heater Repair	\$ 222.05	5.0%	\$ 11.10
Smoke detector	\$ 37.01	95.0%	\$ 35.16
CO detector	\$ 81.42	95.0%	\$ 77.35
Minor Roof Repair	\$ 370.09	2.5%	\$ 9.25
Code Compliance	\$ 125.83	5.0%	\$ 6.29
Stove Repair	\$ 222.05	10.0%	\$ 22.21
Minor Gas Line Repair	\$ 148.03	20.0%	\$ 29.61
Minor Electrical Repair	\$ 222.05	15.0%	\$ 33.31
Minor Plumbing Repair	\$ 148.03	5.0%	\$ 7.40
ASHRAE fan installation	\$ 917.81	40.0%	\$ 367.13
Lead-Safe Work Practices	\$ 251.66	15.0%	\$ 37.75
Asbestos Testing (in siding, walls, ceiling)	\$ 148.03	3.0%	\$ 4.44
Vapor Barrier Installation	\$ 1,110.26	25.0%	\$ 277.57
Gas Appliance Vent Repair/Replacement	\$ 148.03	37.5%	\$ 55.51
Dehumidifier	\$ 333.08	5.0%	\$ 16.65
Sump Pump	\$ 185.04	5.0%	\$ 9.25
Hazardous Material Removal	\$ 148.03	2.0%	\$ 2.96
Exhaust Fan Installation	\$ 133.23	15.0%	\$ 19.98
Total Average H&S Cost Per Unit			\$ 1,999.95
Estimated Production			564
Estimated Program Operations Budget			\$ 4,505,985.84
H&S Budget			\$ 1,126,496.46
Requested H&S Percentage Per Unit			25%

4.0 – INCIDENTAL REPAIR MEASURES

If Grantees choose to identify any H&S measures as incidental repair measures (IRMs), they must be implemented as such under the Grantee's weatherization program in all cases – meaning, they can never be applied to the H&S budget category. In order to be considered IRMs, the measure must fit the following definition and be cost justified along with the associated efficiency measure. Incidental Repairs means those repairs necessary for the effective performance or preservation of weatherization materials. Such repairs include, but are not limited to, framing or repairing windows and doors which could not otherwise be caulked or weather-stripped and providing protective materials, such as paint, used to seal materials installed under this program. [10 CFR 440](#).

(1) Source control (i.e. correction of moisture and mold creating conditions) is allowed when necessary in order to weatherize the home and to ensure the long-term stability and durability of the measures. Some measures that address source control may include, but are not limited to: drainage, gutters, down spouts, extensions, flashing, sump pumps, dehumidifiers, landscaping, leaking roofs, etc. These measures are necessary for the effective performance or preservation of weatherization materials.

- If the home requires the installation or repair of a moisture barrier, drainage, flashing, sump pump, gutters, downspouts, extensions, flashing, dehumidifiers, or landscaping to ensure the insulation in the crawlspace or sidewalls remains fully intact, the cost of installing the barrier can be included as a necessary cost as a result of installing the insulation. If no insulation is being installed in the crawlspace and any of these items serve to prevent mold and moisture growth alone, this measure is considered a H&S cost. All IRM's costs must be justified using a NEAT/MHEA/MuTEA audit.
- If the home requires the repair of a roof leak in order to protect insulation installed in the attic or sidewalls of the home, the cost can be considered an IRM.

(2) A vapor or moisture barrier may be installed as either a H&S cost, or as an IRM to air sealing measures if the cost is justified as part of NEAT audit. Otherwise, this is a H&S cost.

(3) The installation of an ASHRAE fan may not be considered as an IRM to air sealing measures. ASHRAE fans must be considered an H&S cost.

(4) Minor Electrical Repairs, including the repair or replacement of knob and tube wiring, may be considered incidental repairs when associated with the installation and preservation of insulation in the attic or sidewalls. Otherwise, this is a H&S cost.

(5) Lead-Safe Work Practices may be considered an incidental repair when considering the ECM of insulating the sidewalls of a home. Otherwise, this is a H&S cost.

(6) Window and door repair, replacement, or installation is not an allowable H&S cost. These can be considered an ECM or IRM. Window or door air sealing can be an ECM, IRM, or H&S cost.

(7) Venting System Replacement: This can be considered an IRM of the ECM of replacing a heating system. Otherwise, this is a H&S cost.

(8) Ductwork Repair / Replacement: This can be considered an IRM of the ECM of replacing a heating system. Otherwise, this is a H&S cost.

(9) The installation of a chimney liner for an orphaned water heater may be considered as an IRM of the ECM of repairing or replacing a heating system. Otherwise, this is a H&S cost.

(10) Intumescent coating may be considered as an IRM of the ECM of two component foam. Otherwise it can be a H&S cost.

(11) A/C system can be repaired or replaced as an IRM when it would protect an installed ECM. A/C system repair or replacement may utilize H&S funding when documented medical justification by a physician is in the file. All A/C units must be evaluated as an ECM prior to utilizing H&S.

Deferral of services may be necessary if H&S issues cannot be adequately addressed according to [WPN 22-7](#) guidance. The decision to defer work in a dwelling is difficult but necessary in some cases. This does not mean that assistance will never be available, but that work must be postponed until the problems can be resolved and/or alternative sources of help are found. If, in the judgment of the auditor, any conditions exist which may endanger the health and/or safety of the workers or occupants, the unit should be deferred until the conditions are corrected. Deferral may also be necessary where occupants are uncooperative, abusive, or threatening. Grantees must be specific in their approach and provide the process for clients to be notified in writing of the deferral and what conditions must be met for weatherization to continue. Grantees must also provide a process for the client to appeal the deferral decision to a higher level in the organization.

Grantee has developed a comprehensive written deferral/referral policy that covers both H&S, and other deferral reasons?

Yes No

Where can this deferral/referral policy be accessed?

See Appendix AA – Deferral Program at MyIHCDA's [Weatherization](#)

7.0 – HEALTH AND SAFETY CATEGORIES

For each of the following H&S categories identified by DOE:

- *Explain whether you concur with existing guidance from [WPN 22-7](#) and how that guidance will be implemented in your Program, if you are proposing an alternative action/allowability, or if the identified category will not be addressed and will always result in deferral. Alternatives must be comprehensively explained and meet the intent of DOE guidance.*
- *Where an Action/Allowability or Testing is “required” or “not allowed” through [WPN 22-7](#), Grantees must concur, or choose to defer all units where the specific category is encountered.*
- *“Allowable” items under [WPN 22-7](#) leave room for Grantees to determine if the category, or testing, will be addressed and in what circumstances*
- *Declare whether DOE funds or alternate funding source(s) will be used to address the particular category*
- *Describe the explicit methods to remedy the specific category*
- *Describe what testing protocols (if any) will be used*
- *Define minimum thresholds that determine minor and major repairs*
- *Identify minimum documentation requirements for at-risk occupants*
- *Discuss what explicit steps will be taken to educate the client, if any, on the specific category if this is not explained elsewhere in the Plan. Some categories, like mold and moisture, require client education.*
- *Discuss how training and certification requirements will be provided for the specific category. Some categories, like Lead Based Paint, require training.*
- *Describe how occupant health and safety concerns and conditions will be solicited and documented*

Grantees may include additional H&S categories for their particular Programs. Additional categories must include, at a minimum, all of the same data fields as the DOE-provided categories. Two additional tables have been created to utilize.

7.1 – Air Conditioning and Heating Systems

Concurrence, Alternative, or Deferral

Concurrence with Guidance Alternative Guidance Results in Deferral

Air Conditioning Unallowable Measure Heating Unallowable Measure

Funding

DOE LIHEAP State Utility Other

How do you address unsafe or non-functioning primary heating/cooling systems?

If the heating system is operable, the system must be run through NEAT/MHEA/MuI TEA first to determine if it is allowable to be replaced as an energy conservation measure. "Red tagged," inoperable or nonexistent heating system replacement, repair, or installation is allowed with DOE funds and LIHEAP funds. Repairs to outside units is generally not allowable. Repairs can be charged as DOE Health and Safety cost or LIHEAP Mechanical cost. The subgrantee must first determine whether repairs can effectively be made to the heating system to enable it to operate safely, rather than require a replacement.

Sub-grantees are allowed to replace heating systems in the following circumstances:

- A verifiable condition exists that allows combustion gases to enter the living environment. For example, a breach in the heat exchanger that allows combustion gases to mix with the air in the ductwork.
- An improper application of a non-sealed combustion furnace installed in a manufactured home. Manufactured homes are required to have furnaces that draw their combustion air from outside the carriage. All new furnace installations in manufactured homes must be approved for use in manufactured housing.
- Heating systems can be replaced when the NEAT, MHEA, or MuI TEA audit shows the replacement to meet an SIR of 1 or greater. Subgrantees must run a NEAT/MHEA/MuI TEA audit when DOE funding is used to pay for a furnace replacement. The NEAT/MHEA/MuI TEA work scope must be followed once a NEAT/MHEA/MuI TEA audit has been performed on a structure.
- The cost of necessary repairs will exceed 50% of the cost of replacing the heating system.
- Replacement parts are no longer produced or available.
- If the fuel source is no longer available to the client, the Subgrantee must submit a request to IH CDA requesting the change of the fuel source and heating system, and requests will be evaluated on a case-by-case basis.
- New HVAC system selection must comply with SWS

The subgrantee may not continue with weatherization work, particularly air sealing the structure until the combustion gases have been appropriately vented away from the living area.

Before an HVAC system is installed in a unit, a Manual J must be completed. NEAT/MHEA/MuI TEA is not approved heat load calculation tools.

HVAC system replacements in Indiana's Weatherization Assistance Program are justified by utilizing Indiana's Heating Degree Days; the lower one-third of the state has a range of 4000 – 5499, and 5500 – 7000 for the upper two-thirds of the State. This climatic information is incorporated into Indiana's NEAT, MHEA, and MuI TEA runs.

Repairs in one measure exceeding \$1,200.00 is considered a major repair.

How do you address unsafe or non-functioning secondary heating systems, including unvented secondary space heaters?

Unsafe secondary units, including space heaters must be removed, rendered inoperable, **or the home must be deferred.**

Following [WPN 22-7](#), secondary unvented units that conform to the safety standards of ANSI Z21.11.2 may remain as back-up heat sources. DOE is allowing this flexibility primarily to provide low-income clients an emergency back-up source of heat in the event of electrical power outages. To leave a secondary unit behind as a secondary source of heat, the unit must pass the IHEDA Unvented Space Heater Inspection and be properly documented on the form.

Secondary unvented units that do not meet ANSI Z21.11.2 must be removed and properly disposed of prior to weatherization but may remain until a replacement heating system is in place. Repair of secondary unvented units is not allowed. Secondary unvented units that meet the ANSI Z21.11.2, but are not operating safely, must be removed and properly disposed of.

An unvented gas- or liquid-fueled space heaters that remain after weatherization shall:

- Not have an input rating in excess of 40,000 Btu/hour
- Not be located in, or obtain combustion air from sleeping rooms, bathrooms, toilet rooms, or storage closets

IHEDA does not permit any DOE-funded weatherization work on electric space heaters. Repair, replacement, or installation of electric standalone space heaters is not allowed. Removal of these space heaters is recommended. The energy auditor is required to perform a complete evaluation of the heating system on each unit weatherized. Part of this evaluation will be determining what modifications or replacements are required. Stand-alone electric heaters cannot be left in place as a client's sole source of heat. If provisions cannot be made for the installation of a permanent heating source, the home must be deferred. In instances where a new heating system is installed, the client will be educated on the new heating system and advised against using the stand-alone electric space heater. Should the stand-alone electric space heater be found to be unsafe for use in the client's home, it must be removed from use prior to weatherization proceeding.

Unvented gas- or liquid-fueled space heaters must be removed and properly disposed of prior to weatherization in manufactured homes.

Repairs in one measure exceeding \$1,200.00 is considered a major repair.

Indicate Documentation Required for At-Risk Occupants

Auditors determine and document presence of "at-risk" current occupants when installing any Health and Safety measure. Sub-grantees are required to complete the Occupant Health Screening Form.

Testing Protocols

Health and safety inspections ensure that systems are present, operable, and performing. The health and safety inspection of combustion appliances, including heating systems, includes the following items, but are not limited to:

- The rated and measured BTU input of each combustion appliance
- A complete electrical inspection of the furnace including proper grounding, polarity, wiring connections, fuse type and size, element amperage (electrical furnace), disconnect requirements and conduit requirements
- An inspection of all fuel lines in the home from the source to the combustion appliance or line termination. This includes all fittings, connections, shut-off valves, gas valves, sediment traps and end caps
- An inspection for spillage and a reading of the draft of gas/oil furnaces and water heaters (Completion of the appropriate Inspection Form)
- A visual check for flame interference
- A test of the setting and operation of the high limit control switch
- An evaluation of the adequacy of combustion air for combustion appliances
- A check that there are no open return air ducts/leaks in the Combustion Appliance Zone
- Carbon monoxide testing of all combustion appliances
- An inspection, and replacement if necessary, of the furnace filter
- Worst case CAZ depressurization and Indiana Daily Safety Test-Out Form

Client Education

- When deferral is necessary, provide information to the client, in writing, describing conditions that must be met in order for weatherization to commence. A copy of this notification must also be placed in the client file.
- Discuss appropriate use and maintenance of units.
- Provide all paperwork and manuals for any installed equipment.
- Discuss and provide information on proper disposal of bulk fuel tanks when not removed as part of the weatherization work.
- Where combustion equipment is present, provide safety information including how to recognize depressurization.

Training

- WAP Health and Safety policy training on allowable activities.
- Licensing and/or certification for HVAC installers as required by authority having jurisdiction (AHJ).
- CAZ depressurization test and inspection training.

7.2 - Asbestos - All

What is the blower door testing policy when suspected Asbestos Containing Material (ACM) is identified?

Weatherization workers must recognize materials that may contain asbestos and avoid disturbing them. Per [WPN 22-7](#), Subgrantees must not perform a blower door depressurization test in a building where friable asbestos, suspected asbestos containing insulation or vermiculite are present. Unless the suspect material has tested negative for asbestos, a blower door pressurization test must be performed, and must be documented in the client file.

- When suspected asbestos containing materials are present, assume that asbestos is present unless testing has determined otherwise.
- Asbestos Hazard Emergency Response Act of 1986 (AHERA) sample collection and testing must be conducted by a certified asbestos control professional.
- Baseline environmental asbestos sampling is an allowable H&S cost.
- Instruct clients in writing not to disturb suspected ACM.
- AHERA or other appropriate asbestos control professional certification/training is required to abate ACM.
- AHERA or other appropriate asbestos control professional certification/training is required for encapsulation.
- If the Subgrantee has deferred a home which then results in the owner facilitates removal of asbestos containing materials, it is required that the proper documentation validating removal was completed by a trained asbestos professional be provided to the Subgrantee prior to allowing weatherization services to move forward.

Repairs in one measure exceeding \$1,200.00 is considered a major repair.

7.2b – Asbestos - in vermiculite

Concurrence, Alternative, or Deferral

Concurrence with Guidance Alternative Guidance Results in Deferral

Funding

DOE LIHEAP State Utility Other

How do you address suspected ACM's in vermiculite that will be disturbed through the course of weatherization work?

If vermiculite insulation is found in a unit and that vermiculite insulation will require disturbance in order to complete weatherization activities, then the vermiculite insulation must either:

- Be tested by an AHERA professional to determine if asbestos is present or
- Must be assumed to contain asbestos.

If it is tested and the results are positive, then either (a) the ACM must be removed in accordance with [WPN 22-7](#) guidance prior to weatherization activities commencing or (b) the home must be deferred until the ACM can be removed in accordance with [WPN 22-7](#).

- When vermiculite is present, and it is determined that testing will be completed testing is required by an AHERA or other appropriate asbestos control professional.
- If asbestos is present, the home must be able to be weatherized without asbestos disturbance. If it can't, then it must be deferred.
- Do not perform a blower door depressurization test.
- A blower door pressurization test is allowable.
- Use proper respiratory protection while in areas containing vermiculite.
- Encapsulation by an appropriately trained asbestos control professional is allowed.
- Removal is not an allowable cost.
- When deferral is necessary due to asbestos, occupant must provide documentation that a certified professional performed the remediation before work continues.

Repairs in one measure exceeding \$1,200.00 is considered a major repair.

7.2c – Asbestos - on pipes, furnaces, other small, covered surfaces

Concurrence, Alternative, or Deferral

Concurrence with Guidance Alternative Guidance Results in Deferral

Funding

DOE LIHEAP State Utility Other

How do you address suspected ACM's (e.g., pipes, furnaces, other small surfaces) that will be disturbed through the course of weatherization work?

- Assume asbestos is present in suspect covering materials.
- When suspected friable ACM is present, take precautionary measures as if it is asbestos unless testing determines otherwise.
- Encapsulation by an appropriately trained asbestos control professional is allowed and may be conducted prior to blower door testing if the materials are friable.
- Subgrantee may be allowed to remove by an appropriately trained professional on a case-by-case basis.
- Grantees must state in the H&S Plan what criteria the Grantee uses when reviewing requests.
- Charge only those costs directly associated with the testing, encapsulation, or removal to the H&S budget category.
- When deferral is necessary due to asbestos, occupant must provide documentation that a certified professional performed the remediation before work continues.

Testing Protocols

- Assess whether suspected ACMs are present.
- AHERA sample collection and testing is allowed and must be conducted by a certified tester.

Client Education
<ul style="list-style-type: none"> • Instruct clients in writing not to disturb suspected ACM. • Provide asbestos safety information to the client. • Formally notify client in writing of results if testing was performed. • When deferral is necessary, provide information in writing describing conditions that must be met in order for weatherization to commence.
Training and Certification Requirements
<ul style="list-style-type: none"> • How to recognize suspected ACM. • AHERA or other appropriate asbestos control professional certification/training is required to abate the ACM.
Repairs in one measure exceeding \$1,200.00 is considered a major repair.

7.5 – Biologicals and Unsanitary Conditions (odors, mustiness, bacteria, viruses, raw sewage, rotting wood, etc.)		
Concurrence, Alternative, or Deferral		
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>
Unallowable Measure <input type="checkbox"/>		
Funding		
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/> Utility <input type="checkbox"/> Other <input type="checkbox"/>
What guidance do you provide Subgrantees for dealing with biological and/or unsanitary conditions in homes slated for weatherization?		
<ul style="list-style-type: none"> • Remediation of conditions that may lead to or promote biological concerns and unsanitary conditions is allowed. • Addressing bacteria and viruses is not an allowable cost. • Deferral may be necessary in cases where conditions in the home pose a health risk to occupants and/or weatherization workers. 		
Repairs in one measure exceeding \$1,200.00 is considered a major repair.		

Client Education
The designated weatherization professional will inform the client, in writing, of observed conditions. Auditors will provide information on how to maintain a sanitary home and steps to correct deferral conditions. When deferral is necessary, provide information in writing describing conditions that must be met for Weatherization to commence.
Training
Weatherization Professionals receive training on how to recognize biological and unsanitary conditions and when those conditions are cause for deferral. Auditors are also trained in worker safety when coming into contact with biological and unsanitary conditions. All weatherization professionals are required to have infectious disease training.

7.6 – Building Structure and Roofing		
Concurrence, Alternative, or Deferral		
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input checked="" type="checkbox"/>
Funding		
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/> Utility <input type="checkbox"/> Other <input type="checkbox"/>
What guidance do you provide Subgrantees for dealing with structural issues (e.g., roofing, wall, foundation) in homes slated for weatherization?		
<ul style="list-style-type: none"> • Building rehabilitation is beyond the scope of the Weatherization Assistance Program. • Homes that require more than minor repairs must be deferred. 		

How do you define “minor” or allowable structure and roofing repairs, and at what point are repairs considered beyond the scope of weatherization?
<ul style="list-style-type: none"> Minor repairs and installation may be conducted only when the H&S of the occupant/worker(s) is at risk, or necessary to effectively weatherize the home; otherwise, these measures are not allowed. Allowable or “minor” structural and roofing repairs are considered as either H&S repair costs, or included as Incidental repairs.
Repairs in one measure exceeding \$1,200.00 is considered a major repair.
At what point is a site-specific audit required?
A NEAT/MHEA/MuTEA run is required to justify the all IRM's.
Client Education
<ul style="list-style-type: none"> Notify client in writing of structurally compromised areas. When deferral is necessary, provide information in writing describing conditions that must be met in order for weatherization to commence.
Training
Auditors are trained how to identify structural and roofing issues.

7.7 – Code Compliance
Concurrence, Alternative, or Deferral
Concurrence with Guidance <input checked="" type="checkbox"/> Alternative Guidance <input type="checkbox"/> Results in Deferral <input type="checkbox"/>
Funding
DOE <input checked="" type="checkbox"/> LIHEAP <input type="checkbox"/> State <input type="checkbox"/> Utility <input checked="" type="checkbox"/> Other <input type="checkbox"/>
What guidance do you provide Subgrantees for dealing with code compliance issues in homes receiving weatherization measures?
<ul style="list-style-type: none"> Correction of preexisting code compliance issues is not an allowable cost unless triggered by weatherization measures being installed in a specific room or area of the home. When correction of preexisting code compliance issues is triggered, and paid for with WAP funds, document specific code requirements with reference to the weatherization measure(s) that triggered the code compliance issue in the client file. Follow State and local or AHJ codes while installing weatherization measures, including H&S measures. Condemned properties or dwellings where H&S conditions exist that cannot be corrected under this guidance must be deferred.
Repairs in one measure exceeding \$1,200.00 is considered a major repair.
What specific situations commonly trigger code compliance work requirements for your network? How are they addressed?
<p>The following examples commonly trigger code compliance work requirements in Indiana:</p> <ul style="list-style-type: none"> Expansion tank installation for newly installed water heaters is a common code compliance issue. A wire splice is not in a junction box. <p>In every case of code compliance, Indiana indicates that the local code requirement is the AHJ, and if it is determined that the code compliance issue cannot be resolved using traditional weatherization funds, the home must be deferred.</p>
Client Education
<ul style="list-style-type: none"> Inform client in writing of observed code compliance issues when it results in a deferral. When deferral is necessary, provide information in writing describing conditions that must be met in order for weatherization to commence.
Training
Auditors, QCIs, and contractors are all instructed how to determine what code compliance may be required.

7.8 – Combustion Gases

Concurrence, Alternative, or Deferral

Concurrence with Guidance Alternative Guidance Results in Deferral

Funding

DOE LIHEAP State Utility Other

Testing Protocols

Health and safety inspections ensure that systems are present, operable, and performing. The health and safety inspection of combustion appliances, include but are not limited to the following items:

- Combustion safety testing is required when combustion appliances are present
- Test naturally drafting appliances for spillage and CO during CAZ depressurization testing pre- and post-weatherization and before leaving the home on any day when work has been done that could affect draft (e.g., tightening the home, adding exhaust)
- Inspect venting of combustion appliances and confirm adequate clearances
- Utilize the NEAT/MHEA/MuITEA audit to determine if the appliance can be justified as an ECM prior to replacement as an H&S measure

Repairs in one measure exceeding \$1,200.00 is considered a major repair.

Client Education

Clients will be provided with combustion safety and hazards information, including the importance of using exhaust ventilation when cooking and the importance of keeping burners clean to limit the production of CO.

Training

Training will be provided on the following:

- How to perform appropriate testing, determine when a building is excessively depressurized, and the difference between air free and as-measured CO.
- CO action levels.

7.9 – Electrical

Concurrence, Alternative, or Deferral

Concurrence with Guidance Alternative Guidance Results in Deferral

Funding

DOE LIHEAP State Utility Other

What guidance do you provide Subgrantees for dealing with electrical hazards, including knob & tube wiring, in homes slated for weatherization?

The guidance provided is to follow the SWS, Indiana Field Guide, and the National Electric Code (NEC).

Per the electrical inspection section of the SWS-Aligned Indiana Weatherization Field Guide, auditors identify any knob and tube wiring found in the dwelling and test it to see if it is live. Live knob and tube wiring can never be covered by insulation as a result of any weatherization measure. Damming of knob and tube wiring prior to insulation is acceptable. Existing insulation covering live knob and tube shall not be removed. Nor shall additional insulation be added above the knob and tube. Inspect for the presence and condition of knob-and-tube wiring and check for alterations that might create an electrical hazard. If knob-and-tube integrity is questionable, have it inspected by an electrician.

Repairs in one measure exceeding \$1,200.00 is considered a major repair.

How do you define “minor” or allowable electrical repairs, and at what point are repairs considered beyond the scope of weatherization?

<ul style="list-style-type: none"> • Minor repairs are generally defined as, but not limited to, the following: Installation of junction boxes, installation of junction box covers, flagging of junction boxes, replacement of broken outlets and switches, etc. • The replacement of Installing a new electrical panel, new incoming service or completely rewiring a home are not considered minor electrical repairs. • Knob and Tube wiring may be replaced as an Incidental Repair.
Repairs in one measure exceeding \$1,200.00 is considered a major repair.
If repairs are designated as Incidental Repairs, at what point is a site-specific audit required?
NEAT/MHEA/MuITEA must be run for all homes.
Client Education
When electrical issues are the cause of a deferral, auditors will provide clients with information on over-current protection, overloading circuits, and basic electrical safety and risks.
Training
<ul style="list-style-type: none"> • Train how to identify electrical hazards. • Instructed to avoid insulating over or dense packing around live knob and tube wiring while installing insulation in attics, floors, or walls. • Instructed to always follow local (or AHJ) code whenever necessary.

7.10 – Formaldehyde, Volatile Organic Compounds (VOCs), Flammable Liquids, and other Air Pollutants
Concurrence, Alternative, or Deferral
Concurrence with Guidance <input checked="" type="checkbox"/> Alternative Guidance <input type="checkbox"/> Results in Deferral <input type="checkbox"/>
Funding
DOE <input checked="" type="checkbox"/> LIHEAP <input type="checkbox"/> State <input type="checkbox"/> Utility <input checked="" type="checkbox"/> Other <input type="checkbox"/>
What guidance do you provide Subgrantees for dealing with formaldehyde, VOCs, flammable liquids, and other air pollutants identified in homes slated for weatherization?
<ul style="list-style-type: none"> • Removal of pollutants is allowed and is required if they pose a risk to workers or occupants. • If pollutants pose a risk to workers and removal cannot be performed or is not allowed by the client, the unit must be deferred. • Refer to Hazardous Materials Disposal section of WPN 22-7 for more information. • Air sealing house-garage wall can be an ECM or H&S cost
Repairs in one measure exceeding \$1,200.00 is considered a major repair.
Testing Protocols
A sensory inspection for formaldehyde, VOCs, and other air pollutants will be conducted.
Client Education
<ul style="list-style-type: none"> • Inform client in writing of observed hazardous condition and associated risks. • Provide client written materials on safety issues and proper disposal of household pollutants. • When deferral is necessary, provide information in writing describing conditions that must be met in order for weatherization to commence.
Training
Weatherization professionals are trained on how to recognize potential hazards and when removal is necessary.

7.11 – Fuel Leaks				
<i>(please indicate specific fuel type if policy differs by type)</i>				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
Remediation Protocols				
<ul style="list-style-type: none"> When a minor gas leak is found on the utility side of service, the utility service must be contacted before work may proceed. Fuel leaks that are the responsibility of the client (vs. the utility) must be repaired before weatherizing a unit. Notify utilities and temporarily halt work when leaks are discovered that are the responsibility of the utility to address. 				
How do you define allowable fuel leak repairs, and at what point are repairs considered beyond the scope of weatherization?				
<p>Allowable fuel leak repairs are considered repairs made to the fuel system when (non-utility responsible) leaks are found at any point during the weatherization process. Fuel leaks found during the initial inspection that are beyond budgetary restraints may be deferred.</p> <p>Repairs in one measure exceeding \$1,200.00 is considered a major repair.</p>				
Client Education				
Informed clients in writing if fuel leaks are detected.				
Training				
Fuel leak testing and safety protocols are provided to all auditors, QCIs and HVAC professional.				

7.12 – Gas Ovens / Stovetops / Ranges				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
What guidance do you provide Subgrantees for addressing unsafe gas ovens/stoves/ranges in homes slated for weatherization?				
<ul style="list-style-type: none"> When testing indicates a problem, Subgrantees may perform standard maintenance on or repair gas cooktops and ovens. Replacement is not allowed using DOE funds. LIHEAP or other alternative funds may be used to replace the unit. <p>Repairs in one measure exceeding \$1,200.00 is considered a major repair.</p>				
Testing Protocols				
<ul style="list-style-type: none"> Test for gas leaks in the gas piping in and around the range and oven. Turn the oven burner and then range burners to high one-by-one. Inspect the flames and test them for CO. For the oven burner, test at its outlet. For range burners, hold the test probe approximately 8 inches above the flame. For range tops, if after servicing, the CO level still exceeds 100 ppm as measured on any one burner and at a minimum a kitchen rated CO alarm must be installed in the same room as the appliance and perform client education on use of the range. For ovens, if after servicing, the CO level still exceeds 225 ppm as measured, install a CO alarm in the same room as the appliance. Additionally, install a kitchen exhaust fan (minimum 100 cfm) to vent the CO to the exterior OR replace the range. A kitchen rated CO alarm must be installed. Gas ovens, stovetops, and ranges must be replaced using non-DOE funds. 				

7.13 – Hazardous Materials Disposal
[Lead, Refrigerant, Asbestos, Mercury (including CFLs/fluorescents), etc.]
(please indicate material where policy differs by material)

Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input checked="" type="checkbox"/>	Other <input type="checkbox"/>
Client Education				
Inform client in writing of hazards associated with hazardous waste materials being generated/handled in the unit.				
Training				
The OSHA 10-hour training is required for all weatherization workers. Training includes: <ul style="list-style-type: none"> • Appropriate Personal Protective Equipment (PPE) for working with hazardous waste materials. • Disposal requirements and locations. • Health and environmental risks related to hazardous materials. 				
Disposal Procedures and Documentation Requirements				
<ul style="list-style-type: none"> • Hazardous waste materials generated in the course of weatherization work shall be disposed of according to all local laws, regulations and/or Federal guidelines, as applicable. • Document proper disposal requirements in contract language with responsible party. 				
Repairs in one measure exceeding \$1,200.00 is considered a major repair.				

7.14 – Injury Prevention of Occupants and Weatherization Workers
(Measures such as repairing stairs and replacing handrails)

Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
What guidance do you provide Subgrantees regarding allowable injury-related repairs (e.g., stairs, handrails, porch deck board)?				
When necessary to effectively weatherize the home, while ensuring the health and safety of occupants and weatherization professionals, weatherization professionals may make minor repairs and installations necessary to weatherize a unit while ensuring safety.				
How do you define “minor” or allowable injury prevention measures, and at what point are repairs considered beyond the scope of weatherization? Quantify “minor” or allowable injury prevention measures.				
Minor repairs and installation may be conducted only when necessary to effectively weatherize the home to ensure the safety of occupants and weatherization professionals; otherwise, these measures are not allowed. Examples of allowable minor repairs include broken stair risers or broken handrails, weaknesses in subflooring, broken/jagged glass repairs, etc. which facilitate safely entering a portion of the home to complete weatherization work. Replacement or the addition of complete stairwells are not allowable. Building or installing new exterior steps or walkways are not allowable.				
Repairs in one measure exceeding \$1,200.00 is considered a major repair.				
Training				

- All Weatherization Professionals are required to successfully complete an OSHA 10 course.
- All sub-grantees are required to have a written Injury and Illness Prevention Program.
- All sub-grantee staff/contractors are required to attend at least one Competent Maintenance Refresher at the IREC accredited training center.
- All sub-grantee staff/contractors are required to attend any other emergency safety trainings when necessitated by the Grantee.

7.15 – Lead Based Paint

Concurrence, Alternative, or Deferral

Concurrence with Guidance Alternative Guidance Results in Deferral

Funding

DOE LIHEAP State Utility Other

Safe Work Protocols

The EPA is the governmental agency which regulates Lead. The Department of Energy guidelines adhere to the EPA Lead Renovation, Repair, and Painting Program. This program mandates the following, but is not limited to:

- Sub-grantees staff and contractors must follow EPA Lead: Renovations, Repair and Painting Program (RRP) when working in pre-1978 housing unless testing confirms the work area to be lead free
- Deferral is required when the extent and condition of lead-based paint in the unit would potentially create further H&S hazards
- Only those costs directly associated with the testing and lead safe practices for surfaces directly disturbed during weatherization activities are allowable
- Documentation in the client file must include:
 - Certified Renovator certifications
 - Lead testing report completed by Lead Risk Assessor or Lead Inspector
 - Client signed document verifying receipt of the EPA Renovate Right within 60 days of the start of the work
 - EPA compliant record keeping checklist
 - Photographs of lead safe work practices must include all tasks required on the Sample Renovations Recordkeeping Checklist
- Testing to determine the presence of lead in paint that will be disturbed by WAP measure installation is allowed with EPA-approved testing methods
- Jobsite set-up and cleaning verification by a Certified Renovator is required
- All employees and contractors working on pre-1978 homes must receive training to install measures in a lead-safe manner in accordance with the EPA and [WPN 22-7](#) protocols and installation must be overseen by an EPA Certified Renovator

IHCDA monitoring will verify sub-grantees are utilizing proper lead safe protocols; will verify credentials for Lead Risk Assessors, Lead Inspectors, and RRP Certified Lead Renovators; and will verify each sub-grantee and subcontractor maintain the EPA Lead Safe Certified Firm status, and verify X-Ray Fluorescence Spectrometer (XRF) analyzer for resourcing and leak testing.

Testing for Lead

All units built pre-1978 are required to be tested for the presence of lead prior to any work commencing, including work completed with deferral funds. Each sub-grantee has at least one XRF analyzer. Resourcing or purchasing an XRF is not an allowable DOE funded cost. The cost of purchasing a new XRF or resourcing an existing XRF in which the cost exceeds \$5,000.00 requires written permission from IHCDA prior to the expenditure. In the event the sub-grantee XRF is out of commission, contact INCAA for coordination of a temporary loaner XRF. Each sub-grantee must have at least one staff member who is a licensed Lead Risk Assessor and/or who is a licensed Lead Inspector.

It is required the Lead Risk Assessor and/or Lead Inspector prepare a compliant report and that a copy of this report be placed in the client file. In the event a contractor is completing work in this home, the contractor

must also be forwarded a copy of the Lead Inspector and/or Lead Risk Assessor report. In the event that weatherization professionals are working in the unit and they are required to disturb an area of the unit which has not been tested by the Lead Risk Assessor and/or Lead Inspector, a RRP Certified Lead Renovator may utilize an EPA approved [Lead Test Kit](#) to determine if lead is present in the area to be disturbed. All Lead Inspectors, Lead Risk Assessors, and RRP Certified Lead Renovators must follow all regulations, guidelines, and laws set forth for their particular certification. At a minimum, IHCDCA requires the following information for a lead risk assessor/lead inspector report:

- Lead Risk Assessor or Inspector license number and expiration date
- Property address
- Name of Lead Risk Assessor or Inspector
- The instrument used for lead testing
- Serial number of the instrument
- Description of areas tested
- XRF report

In addition to DOE, EPA, and SWS requirements, IHCDCA has established additional protocol which include safety with regard to the EPA's *de minimus* level of interior and exterior surfaces; and also IHCDCA no longer allows sub-grantees to *assume* the presence of lead based paint. IHCDCA addresses *de minimus* surface area through the "We Care About Lead" policy. The purpose of this policy is to ensure the utmost safety of weatherization professionals and occupants of Indiana Weatherization households. The safety protocol for the IHCDCA "We Care About Lead" policy is as follows:

- Conduct set up to prevent lead dust from contaminating the work area
- Wet/moisten the surface area being disturbed
- Limit access to the area where paint is being disturbed
- Ensure that all appropriate personal protective equipment is utilized
- Conduct necessary work
- Ensure proper disposal of trash and material is removed from the job site
- Provide photo of proof of using wet methods and appropriate set up.

All sub-grantees and contracted weatherization subcontractors performing work in units built prior to 1978 are required, but not limited to the following:

- Obtain and maintain Lead Safe Certified Firm status through the EPA. This must be renewed every 5 years. Sub-grantees may check their status by utilizing the following EPA's [Lead Renovation Abatement Firm Certification Application or Update](#). All certifications will be verified during the annual monitoring process
- An EPA approved Certified Renovator (RRP) must present during lead safe set up, must be readily available via in person, via telephone, or via email throughout the duration of the project; and be present during the cleanup phase of the lead project
- The EPA RRP Certified Renovator must provide a completed Renovator Checklist to the sub-grantee Weatherization Program Manager or the manager's designee
- Provide meaningful photographs documenting all points of EPA leaded requirements
- Follow all requirements set forth by the EPA and all other AHJ
- Obtain confirmation of receipt (Appendix H - Client Consent Form) of the EPA-Renovate Right lead pamphlet from the owner, adult representative, or occupants (as applicable), or a certificate of mailing from the United State Postal Service (USPS) for all units built prior to 1978
- Ensure documentation that the required EPA education and documents have been provided to unit owner and applicable occupants within 6 months of work commencing
- Adhere to IHCDCA "We Care About Lead" policy
- Attend the Lead Safe Weatherization course held at INCAA
- Must use an EPA approved lead test or an XRF lead paint analyzer
- Only devices with a posted PCS may be used for lead paint inspections. If you use a XRF without a current PCS or do not follow the requirements of the PCS, the work will be considered invalid and the work will have to be re-done. To obtain the appropriate XRF Performance Characteristic Sheet, contact the National Lead Information Center Clearinghouse (1-800-424-LEAD) or HUD's [Guidelines](#).

- Ensure the program recordkeeping requirements are met, including retaining the following for a minimum of 6 years
 - Lead Risk Assessor or Lead Inspector report certifying lead based paint is or is not present
 - Records confirming distribution of EPA's lead hazard information pamphlet "[Renovate Right](#)" before starting renovation work for sample document
 - Documentation of compliance with the requirements of the EPA when there is disturbance of lead paint at the unit via EPA's [Sample Checklist](#)

Sub-grantee staff and contractors working in weatherization units are trained on how to adhere to safe work practices ensuring adherence to the following, but not limited to, EPA, OSHA, [29 CFR 1910](#) and [29 CFR 1926](#). Sub-grantee must ensure weatherization staff are provided with and trained on the use of appropriate Personal Protective Equipment (PPE) per appropriate OSHA and CFRs regulations/laws as applicable.

Sub-grantees performing weatherization services are encouraged to obtain Pollution Occurrence Insurance. If subgrantees have Pollution Occurrence Insurance it cannot exclude lead.

Sub-grantees are required to ensure new weatherization employees are trained on lead safe work practices and provided with proper PPE, at minimum, within the first 3 months of employment to protect employees from the hazards of lead during weatherization work. Sub-grantee weatherization professionals may not engage in lead renovation activities until they receive proper training and PPE. It is highly recommended that all Program Managers and Executive Directors attend training related to lead and applicable PPE to ensure a minimum level of liability compliance understanding for the sub-grantee.

Renovator Certification

To become a certified renovator an individual must successfully complete an 8-hour initial renovator training course offered by an accredited training provider accredited by EPA or an authorized state or tribal program. The course completion certificate serves as proof of certification. A refresher training for recertification is required every 5 years. Each sub-grantee is required to have at least one EPA RRP Certified Lead Renovator on staff at all times. It is required by the EPA that "anyone who is paid to perform work that disturbs paint in housing and child-occupied facilities built before 1978 must be certified". This includes all firms, even sole proprietorships and special trade contractors including electricians, plumbers, painters, and carpenters.

The designated RRP Certified Lead Renovator must follow all lead requirements set forth by the EPA. The position of RRP Certified Lead Renovator is a position which requires one who is competent to act in a leadership role, as well as one who is thorough and diligent with regard to ensuring the physical, photographic, and paper documentation compliance requirements are met. This is to ensure the safety of weatherization professionals, unit occupants, and also for the liability protection of the sub-grantee.

Repairs in one measure exceeding \$1,200.00 is considered a major repair.

Testing Protocols

- All units built pre-1978 are required to be tested for the presence of lead prior to any work commencing, including work completed with deferral funds. All sub-grantees have a minimum of **one** XRF analyzer.
- In the event that weatherization professionals are working in the unit and they are required to disturb an area of the unit which has not been tested by the Lead Risk Assessor and/or Lead Inspector, a RRP Certified Lead Renovator may utilize an EPA approved [Lead Test Kit](#) to determine if lead is present in the area to be disturbed.

Client Education

- Follow pre-renovation education provisions for EPA RRP Program
- When deferral is necessary, provide information in writing describing conditions that must be met in order for weatherization to commence.

Training and Certification Requirements

- All employees and contractors working on pre-1978 homes must receive training to install measures in a lead-safe manner in accordance with the SWS and EPA protocols, and installation must be overseen by an EPA Certified Renovator.

<ul style="list-style-type: none"> • Grantee Monitors and Inspectors must be Certified Renovators.
Documentation Requirements
All documentation required by EPA and IHCD as outlined in the IHCD Weatherization Policy and Procedure Manual.

7.16 – Mold and Moisture

(Including but not limited to: drainage, gutters, down spouts, extensions, flashing, sump pumps, dehumidifiers, landscape, vapor retarders, moisture barriers, etc.)

Concurrence, Alternative, or Deferral		
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>

Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>

What guidance do you provide Subgrantees for dealing with moisture related issues (e.g., drainage, gutters, down spouts, moisture barriers, dehumidifiers, vapor barrier on bare earth floors) in homes slated for weatherization?

- Limited water damage repairs that can be addressed by weatherization workers are allowed when necessary in order to weatherize the home and to ensure the long-term stability and durability of the measures.
- Source control (i.e. correction of moisture and mold creating conditions) is allowed when necessary in order to weatherize the home and to ensure the long-term stability and durability of the measures. Source control is independent of latent damage and related repairs.
- Where severe Mold and Moisture issues cannot be addressed, deferral is required.
- Mold cleanup is not an allowable H&S cost. These costs may be paid for using non-DOE funds.
- Surface preparation where weatherization measures are being installed (e.g., cleaning mold off window trim in order to apply caulk) must be charged as part of the ECM, not to the H&S budget category.
- Air sealing may be utilized to mitigate moisture transport. It may be charged as an ECM or IRM. Air sealing may be charged to H&S only when done to stop bulk moisture intrusion that does not reduce the blower door.

How do you define “minor” or allowable moisture-related measures, and at what point is work considered beyond the scope of weatherization?

Moisture related issues can be addressed within H&S or IRM; however, mold clean-up is not an allowable health and safety cost.

Repairs in one measure exceeding \$1,200.00 is considered a major repair.

- Client Education**
- Provide client written notification and disclaimer on mold and moisture awareness.
 - Provide information on importance of cleaning and maintaining drainage systems.
 - Provide information on proper landscape design and how this impacts site drainage and moisture control.
 - When deferral is necessary, provide information in writing describing conditions that must be met in order for weatherization to commence.

Training

Each Subgrantee’s crews or contractors receive specialized training in moisture awareness, ventilation, indoor air quality, and mold hazards. A mold awareness course is offered by the training and technical service provider and teaches Weatherization technicians and auditors how to identify the conditions that promote mold growth. This class identifies treatment options for less extensive mold conditions and best Weatherization practices to prevent mold growth. This class also discusses the health aspects related to mold and moisture issues for both workers and clients. This course is intended to prepare technicians and

auditors to know how to safely proceed with Weatherization services or when to defer the home until serious mold and moisture conditions have been eliminated.

7.17 – Pests				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input checked="" type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
What guidance do you provide Subgrantees for dealing with pests and pest intrusion prevention in homes slated for weatherization?				
<ul style="list-style-type: none"> • If sufficient funding is not available through DOE or other funding sources to eliminate the pest, the home must be deferred. • Pest removal is allowed only where infestation would prevent weatherization. • Screening of windows and points of access, and incorporating pest exclusion into air sealing practices to prevent intrusion is allowed. 				
Repairs in one measure exceeding \$1,200.00 is considered a major repair.				
Define Pest Infestation Thresholds, Beyond Which Weatherization Is Deferred				
Infestation of pests may be cause for deferral where it poses H&S concern for workers and/or occupants.				
Testing Protocols				
Assessment of presence and degree of infestation and risk to workers and occupants.				
Client Education				
<ul style="list-style-type: none"> • Sub-grantees will inform clients in writing of the observed condition and associated risks. • When deferral is necessary, provide information in writing describing condition that must be met in order for weatherization to commence. 				
Training				
Weatherization Professional are trained how to assess the presence and degree of infestation, associated risks, and need for deferral through various courses by the training provider. These courses include but are not limited to competency maintenance refreshers, client education. WPN 22-7 .				

7.18 – Radon				
Concurrence, Alternative, or Deferral				
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>		
Funding				
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/>	Utility <input type="checkbox"/>	Other <input type="checkbox"/>
What guidance do you provide Subgrantees around radon?				
<ul style="list-style-type: none"> • Radon mitigation is not an allowable H&S cost. • Clients must sign an informed consent form prior to receiving weatherization services. This form must be kept in the client file. • Work scope must include precautionary measures based on EPA Healthy Indoor Environment Protocols for Home Energy Upgrades, to reduce the possibility of making radon issues worse. • If in inaccessible areas, radon testing yields 4 or greater picocuries per liter of air, all exposed dirt floors within the pressure/thermal boundary must be covered with 6 mil (or greater) polyethylene sheeting, lapped at least 12” and sealed with appropriate sealant at all seams, walls and penetrations. If an area is not tested, all exposed dirt floors must be covered to SWS specifications. • Other precautions may include, but are not limited to, sealing any observed floor and/or foundation penetrations, including open sump pits, isolating the basement from the conditioned space, and ensuring crawl space venting is installed. 				
Repairs in one measure exceeding \$1,200.00 is considered a major repair.				

Testing Protocols

Radon testing is not currently required by IHCDA. Sub-grantees may test at their discretion in areas with high radon potential. Radon mitigation is not an allowable Health and Safety cost.

Client Education

- Provide all clients EPA's A Citizen's Guide to Radon and inform them of radon related risks.
- Informed consent form must include:
 - Information from the results of the IAQ Study that there is a small risk of increasing radon levels when building tightness is improved
 - A list of precautionary measures WAP will install based on EPA Healthy Indoor Environment Protocols
 - Some of the benefits of Weatherization including energy savings, energy cost savings, improved home comfort, and increased safety
 - Confirmation that EPA's A Citizen's Guide to Radon was received and radon related risks discussed with the client

Training and Certification Requirements

- Auditors, assessors and inspectors must have knowledge of radon, what it is and how it occurs, including what factors may make radon worse, and precautionary measures that may be helpful.
- Workers must be trained in proper vapor retarder installation.
- EPA's [Radon Zonal Map for Indiana](#)

Documentation Requirements

A copy of the client-signed informed consent form must be kept in the client file.

7.19 – Safety Devices: Smoke and Carbon Monoxide Alarms, Fire Extinguishers

Concurrence, Alternative, or Deferral

Concurrence with Guidance Alternative Guidance Results in Deferral

Funding

DOE LIHEAP State Utility Other

What is your policy for installation or replacement of the following?

Smoke Alarms

- Install smoke alarms in accordance with UL217 in units where they are not present or are inoperable.
- At a minimum, each unit is required to have at least one smoke alarm on each level near the bedrooms.
- All smoke alarms will be installed per manufacturer specifications.
- Select battery operated smoke alarms that are listed and labeled in accordance with UL217 and have sealed, non-replaceable, 10-year batteries.
- Auditors must check the functionality and expiration date on all existing smoke alarms.
- **Repairs in one measure exceeding \$1,200.00 is considered a major repair.**

Carbon Monoxide Alarms

- Select CO alarms that are listed and labeled in accordance with UL2034, or approved by the authority having jurisdiction, and have a minimum of 10-year manufacturer's warranty and contain internal non-replaceable batteries.
- All weatherized units must contain at least one CO alarm per floor, including all electric homes.
- Auditors must check the functionality and expiration date on all existing CO alarms.
- All CO alarms must be installed per manufacturer specifications.
- **Repairs in one measure exceeding \$1,200.00 is considered a major repair.**

Fire Extinguishers

- Where solid fuel burning equipment is present, fire extinguishers may be provided as an allowable H&S measure.
- **Repairs in one measure exceeding \$1,200.00 is considered a major repair.**

Testing Protocols

- Check existing alarms for operation and expired expiration date.
- When solid fuel burning equipment is present and there is an existing fire extinguisher present, check the expiration date.
- Verify operation of installed alarms.

Client Education

Provide client with verbal and written information on use of devices installed.

Training

Weatherization Professionals are trained on where to install smoke and carbon monoxide alarms.

7.20 – Occupant Health and Safety Concerns and Conditions		
Concurrence, Alternative, or Deferral		
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>
Funding		
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/> Utility <input checked="" type="checkbox"/> Other <input type="checkbox"/>
What guidance do you provide Subgrantees for soliciting the occupants' health and safety concerns related to components of their homes?		
When a person's health may be at risk and/or the work activities could constitute a health or safety hazard, the occupant at risk will be required to take appropriate action based on severity of risk. Failure or the inability to take appropriate actions must result in deferral.		
Repairs in one measure exceeding \$1,200.00 is considered a major repair.		
What guidance do you provide Subgrantees for determining whether occupants suffer from health conditions that may be negatively affected by the act of weatherizing their home?		
IHCDA has created an Occupant Health Screening Form, which gives the client the guidance and opportunity to disclose their refusal of products or weatherization measures that they or their physician may deem a potential compromise to their health and/or wellbeing.		
What guidance do you provide Subgrantees for dealing with potential health concerns when they are identified?		
IHCDA has created an Occupant Health Screening Form, which gives the client the guidance and opportunity to disclose their refusal of products or weatherization measures that they or their physician may deem a potential compromise to their health and/or wellbeing. All weatherization professionals are required to have infectious disease training.		
Client Education		
<ul style="list-style-type: none"> • Sub-grantees inform clients in writing of any known risks. • When deferral is necessary, provide information in writing describing conditions that must be met in order for weatherization to commence. 		
Documentation Form(s) have been developed and comply with guidance?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

7.21 – Ventilation and Indoor Air Quality		
Concurrence, Alternative, or Deferral		
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>
Funding		
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/> Utility <input type="checkbox"/> Other <input type="checkbox"/>
Identify the Most Recent Version of ASHRAE 62.2 Implemented (optional: identify Addenda used)		
Indiana has implemented ASHRAE 62.2 – 2016.		
Testing and Final Verification Protocols		
Each home is evaluated to meet the ASHRAE 62.2-2016 standard at the initial audit. An ASHRAE 62.2-2016 calculator is utilized to estimate whole house ventilation needs. At the Quality Control Inspection the same calculator is utilized to verify compliance with ASHRAE 62.2-2016 Standard.		
<ul style="list-style-type: none"> • If client refuses ventilation as required by ASHRAE 62.2-2016, the unit must be deferred. 		
Repairs in one measure exceeding \$1,200.00 is considered a major repair.		
Client Education		
<ul style="list-style-type: none"> • Provide client with information on function, use, and maintenance (including location of service switch and cleaning instructions) of ventilation system and components. • Provide client with equipment manuals for installed equipment. • Include disclaimer that ASHRAE 62.2-2016 does not account for high polluting sources or guarantee indoor air quality. 		
Training		

IHCDA's training provider offers a training course titled ASHRAE 62.2-2016.

7.22 – Window and Door Replacement, Window Guards		
Concurrence, Alternative, or Deferral		
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>
Funding		
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/> Utility <input type="checkbox"/> Other <input type="checkbox"/>
What guidance do you provide to Subgrantees regarding window and door replacement and window guards?		
Window and door repair, replacement, or installation is not an allowable H&S cost.		
Testing Protocols		
N/A		
Client Education		
Provide written information on lead risks wherever issues are identified.		
Training		
Weatherization Professionals are made aware of guidance during training.		

7.23 – Worker Safety (OSHA, etc.)		
Concurrence, Alternative, or Deferral		
Concurrence with Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral <input type="checkbox"/>
Funding		
DOE <input checked="" type="checkbox"/>	LIHEAP <input type="checkbox"/>	State <input type="checkbox"/> Utility <input checked="" type="checkbox"/> Other <input type="checkbox"/>
How do you verify safe work practices? What is your policy for in-progress monitoring?		
<ul style="list-style-type: none"> • Weatherization Professionals must follow OSHA standards where required and take precautions to ensure the H&S of themselves and other workers. • All sub-grantees and contractors must maintain compliance with the current OSHA Hazard Communication Standard (HAZCOM Standard), including on-site organized Safety Data Sheets (SDS) (formerly called MSDS). • HAZCOM Standard requires frequent and regular safety meetings. Grantee offers four Competency Maintenance Refreshers (CMR) each year. All Wx professionals must attend at least one CMR per year in which safety aspects of weatherization are covered. • In the event of a local, regional, or national emergency or crisis, Grantee will direct IREC accredited training center to provide additional required training to address specific emergency crisis, e.g., infectious disease training, COVID training, and refresher on proper PPE and respiratory protection. • Within the Indiana sub-grantee required OSHA training curriculum, Module 11- Confined Space, is covered in the OSHA 10 course provided by the IREC accredited training center for Indiana. • Each sub-grantee is required to have a written internal agency Injury and Illness Prevention Plan. • OSHA states the responsibility of protecting employees is incumbent upon the employer(sub-grantee) to provide frequent and regular safety meetings for employees. • All sub-grantees are required to have and follow an approved respiratory protection policy/illness Prevention Program. • Grantee Monitoring monitors to ensure all required safety trainings and written policies are in place at the sub-grantee level. • Grantee Monitoring will ensure sub-grantees provide documentation of compliance in providing “frequent and regular” safety meetings for employees. • All COVID/Infectious disease OSHA standards must be followed • Environmental and surveillance testing as required by OSHA is allowable • Repairs in one measure exceeding \$1,200.00 is considered a major repair. 		

Training and Certification Requirements

The OSHA 10-hour training is required for all Weatherization Professionals.

- All sub-grantees are required to have a written Injury and Illness Prevention Program.
- All sub-grantee staff/contractors are required to attend at least one Competent Maintenance Refresher at the IREC accredited training center.
- All sub-grantee staff/contractors are required to attend any other emergency safety trainings when necessitated by the Grantee.

7.24 – Decommissioning

Concurrence, Alternative, or Deferral

Concurrence with Guidance Alternative Guidance Results in Deferral

Funding

DOE LIHEAP State Utility Other

Remediation Protocols

Decommissioning of an unvented space heater

In the event an unvented space heater is required to be removed from the unit the following must be completed:

- Remove unvented space heater from the unit
- Equipment will be disposed of in accordance with local laws and regulations, recycling materials when feasible
- Gas line shall be removed and capped as close to branch tee as possible
- Cap shall be tested for gas leaks after gas line is removed
- Repairs in one measure exceeding \$1,200.00 is considered a major repair.

Decommissioning of abandoned vent systems

When vent systems are no longer being utilized, the following must be completed for:

- **Masonry Chimney:** Vent connectors must be removed. Interior masonry chimney connector opening must be sealed with metal cap, cement/mortar, or a combination of metal cap and cement/mortar.
- **Type B-vent and Manufactured Vent System:** Vent sections must be removed as far away from disconnection as practical, (i.e. typically at ceiling level) and sealed with a metal cap
- Repairs in one measure exceeding \$1,200.00 is considered a major repair.

The decommissioned vents must be tagged as "Unsafe To Use"

Decommissioning of gas fireplace

- Gas line shall be removed and capped as close to branch tee as possible
- Cap shall be tested for gas leaks after gas line is removed
- Depending on the vent system type, refer below to applicable protocols:
 - **Type B-vent and Manufactured Vent System:** Vent sections must be removed as far away from disconnection as practical, (i.e. typically at ceiling level) and sealed with a metal cap

Repairs in one measure exceeding \$1,200.00 is considered a major repair.

The decommissioned vent must be tagged as "Unsafe To Use"

Decommissioning of solid fuel open hearth fireplace

Exterior

- Cover chimney top with a chimney cap with an animal screen/guard
- Top of chimney should NOT be permanently disabled/airsealed
- Safety of weatherization professionals is paramount
- If a chimney cap is not a feasible option, sub-grantee must include meaningful photograph(s) and written justification in the file.
- Repairs in one measure exceeding \$1,200.00 is considered a major repair.

Interior

- Install foam board and drywall with a support structure to ensure durability
- The decommissioned fireplace must be tagged as “Unsafe to Use”
- Repairs in one measure exceeding \$1,200.00 is considered a major repair.

When a solid fuel open hearth fireplace is present, the blower door must be operated at 300 cfm to simulate a fire in the fireplace. If open hearth fireplace is left operating post weatherization, it must be inspected by a qualified chimney sweep and must be deemed safe to use. A copy of this letter must be placed in the client file. The Worst-Case CAZ Depressurization limit for a wood stove which obtains combustion air from the home is -4.0 Pascals of pressure. The Worst-Case CAZ Depressurization limit for an EPA approved direct vent wood stove is -10.0 Pascals of pressure. If either of these limits are met or exceeded, the respective wood stove will require decommissioning. A copy of the Worst-Case Testing form for all of the above-mentioned ventilations systems must be in the client file.

7.24 – Water Heaters

Concurrence, Alternative, or Deferral

Concurrence with Guidance Alternative Guidance Results in Deferral

Funding

DOE LIHEAP State Utility Other

Remediation Protocols

Water heaters are an allowable H&S cost when they are leaking, there are elevated CO levels beyond the safety threshold, repair cannot yield a safe water heater, there are electrical hazards, beyond cost effective repair, or the cost of repair is more than 50% the cost to replace. If not listed above, additional replacements may be allowable on a case by case basis when approved by IHCDCA.

Minor safety repairs of water heaters is allowable (e.g., T&P valve piping, backflow prevention devices, expansion tanks).

It is allowable to replace, repair, or install primary water heater heaters when existing primary water heater is unsafe, inoperable, or nonexistent.

Repairs in one measure exceeding \$1,200.00 is considered a major repair.

Testing Protocols

Visual inspection and required completion of appropriate IHCDCA Appliance Inspection Form.

Client Education

- Provide information on appropriate use and maintenance of units
- Provide all paperwork and manuals for any installed equipment.
- Where combustion equipment is present, provide combustion safety and hazards information including how to recognize depressurization, dangers of CO poisoning, and fire risks associated with combustion appliance use.

Training

The training center provides a training on Water Heaters.