Alabama Weatherization Health and Safety Plan

2022 Program Year

☐ 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.

This Health and Safety Policy is part of the 2022 Alabama Weatherization Assistance Program. Effective April 1, 2022 through March 31, 2023

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.

Low percentages should include a statement of what other funding is being used to support H&S costs, while larger percentages will require greater justification and relevant historical support. It is possible that these limits may vary depending upon conditions found in different geographical areas. These limits must be expressed as a percentage of the ACPU. For example, if the ACPU is $5,000, then an average expenditure of $750 per dwelling would equal 15 percent expenditures for H&S.

15 percent is not a limit on H&S expenditures but exceeding this amount will require ample justification. These funds are to be expended by the Program in direct weatherization activities. While required as a percentage of the ACPU, if budgeted separately, the H&S costs are not calculated into the per-house limitation. DOE strongly encourages using the table below in developing justification for the requested H&S budget amount. Each H&S measure the Grantee anticipates addressing with H&S funds should be listed along with an associated cost for each measure, and by using historical data the estimated frequency that each measure is installed over the total production for the year.

It is also recommend reviewing recent budget requests, versus expenditures to see if previous budget estimates have been accurate. The resulting “Total Average H&S Cost per Unit” multiplied by the Grantee’s production estimate in the Annual File should correlate to the H&S budget amount listed in the Grantee’s state plan.

Should a Grantee request to have more than 15 percent of Program Operations used for health and safety purposes, DOE will conduct a secondary level of review. DOE strongly encourages use of this H&S template and matrix to help expedite this process.
<table>
<thead>
<tr>
<th>Enter Measure ↓</th>
<th>Enter Cost ↓</th>
<th>Enter Frequency % ↓</th>
<th>Auto Calculates</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO Alarm</td>
<td>$50.00</td>
<td>90.0%</td>
<td>$45.00</td>
</tr>
<tr>
<td>Smoke Alarm</td>
<td>$75.00</td>
<td>44.5%</td>
<td>$33.40</td>
</tr>
<tr>
<td>ASHRAE 62.2-2016</td>
<td>$600.00</td>
<td>60.0%</td>
<td>$360.00</td>
</tr>
<tr>
<td>Install Direct-Vent Space Heater</td>
<td>$2,500.00</td>
<td>10.0%</td>
<td>$250.00</td>
</tr>
<tr>
<td>Repair Roof Leak</td>
<td>$200.00</td>
<td>4.0%</td>
<td>$8.00</td>
</tr>
<tr>
<td>Clean Gas Stove</td>
<td>$50.00</td>
<td>5.0%</td>
<td>$2.50</td>
</tr>
<tr>
<td>DWH Drip Line</td>
<td>$60.00</td>
<td>10.0%</td>
<td>$6.00</td>
</tr>
<tr>
<td>Remove UVSH</td>
<td>$60.00</td>
<td>10.0%</td>
<td>$6.00</td>
</tr>
<tr>
<td>Replace Dryer vent</td>
<td>$80.00</td>
<td>23.0%</td>
<td>$18.40</td>
</tr>
<tr>
<td>Correct Electrical Issue</td>
<td>$300.00</td>
<td>5.0%</td>
<td>$15.00</td>
</tr>
<tr>
<td>LSW</td>
<td>$350.00</td>
<td>8.0%</td>
<td>$28.00</td>
</tr>
<tr>
<td>Repair/Upgrade Venting</td>
<td>$230.00</td>
<td>5.0%</td>
<td>$11.50</td>
</tr>
<tr>
<td>Hazardous Material Disposal</td>
<td>$300.00</td>
<td>1.0%</td>
<td>$3.00</td>
</tr>
<tr>
<td>Furnace Replacment</td>
<td>$3,500.00</td>
<td>3.0%</td>
<td>$105.00</td>
</tr>
<tr>
<td>Furnace Repair/Tune</td>
<td>$350.00</td>
<td>5.0%</td>
<td>$17.50</td>
</tr>
<tr>
<td>Mold/Moisture</td>
<td>$300.00</td>
<td>10.0%</td>
<td>$30.00</td>
</tr>
<tr>
<td>Repair Gas Leak</td>
<td>$60.00</td>
<td>2.0%</td>
<td>$1.20</td>
</tr>
<tr>
<td>Fire Extenguisher</td>
<td>$50.00</td>
<td>10.0%</td>
<td>$5.00</td>
</tr>
<tr>
<td>Pest Removal</td>
<td>$300.00</td>
<td>1.0%</td>
<td>$3.00</td>
</tr>
<tr>
<td>Drainage Issues</td>
<td>$150.00</td>
<td>1.0%</td>
<td>$1.50</td>
</tr>
</tbody>
</table>

Total Average H&S Cost Per Unit $950.00

| Enter Estimated Production (Annual File: IV.2 WAP Production Schedule) ➔ | 400 |
| Enter Estimated Program Operations Budget ➔ | 1871908 |
| H&S Budget (Total Average H&S Cost Per Unit * Estimated Production) | $379,999.00 |
| Requested H&S Percentage Per Unit (H&S Budget/Program Operations) | 20.3% |

### 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 “Definitions”](#))

Incidental repairs are repairs that are necessary for the effective performance or preservation of weatherization materials. Incidental repairs must be coupled with a weatherization measure – either an energy-saving measure or a health and safety measure. Therefore, such costs should be billed together with the measure for which the incidental repair is needed.
For example, when correcting knob-and-tube wiring in an attic, itself an incidental repair, the costs involved to correct the knob-and-tube wiring should be billed together with attic insulation, an energy efficient measure. Consequently, the cost of this incidental repair is to be billed to Program Operations – not Health and Safety. Conversely, when incidental repair costs are incurred in the installation of a health and safety measure; e.g., moving a gas line to install a direct vent space heater, then the cost of moving the gas line should be billed together with the installation of the direct vent space heater. Thus, the cost of moving the gas line is to be billed to Health and Safety – not Program Operations.

Roof Repair is a measure that depending on circumstances could be considered an incidental to attic insulation by protecting the attic insulation or a Health and Safety measure because it reduces the chance of mold/moisture issued in the home.

To properly classify this measure across the network the two options will be defined as follows:
In units that receive attic insulation as a weatherization measure any roof repair will be considered a measure incidental to the insulation.
In units that do not receive attic insulation roof repair will be considered a health and safety measure which reduces the chance of mold/moisture.
An incidental repair that has no direct link to a specific weatherization measure is not an allowable expenditure. Priming or painting, for instance, is not allowable if its use does not directly seal and/or protect the weatherization materials.

Costs involved with incidental repairs may not be trivial. Cases in which the cost of an incidental repair exceeds the actual cost of the weatherization measure it is coupled with may make the weatherization measure unallowable by having a SIR of less than 1.0.

Finally, when the costs of essential weatherization measures such as infiltration and insulation are compromised by the costs of their related incidental repairs, then deferring weatherization may be in order.

Alabama’s Priority Measures lists’ cap incidental costs to $500.00 for ECMs, if incidental costs are greater that $500.00 the unit must be evaluated with and energy audit and the cost of the incidental repair must be included in the cost of the measure in which it is associated.

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**5.0 — DEFERRAL/REFERRAL POLICY**

Deferral of services may be necessary if H&S issues cannot be adequately addressed according to WPN 17-06 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 ☐ |

Weatherization Deferral Policy

Deferral may be necessary if issues cannot be adequately addressed. The decision to defer work in a dwelling is difficult but necessary in some cases. This does not necessarily mean that assistance will never be provided, but that weatherization work must be postponed until the problematic conditions causing deferral can be resolved with alternative sources of help and/or funding. In the judgment of the assessor, any conditions that exist, which may endanger the health and/or safety of the occupants or workers, should necessitate that weatherization be deferred until the conditions are corrected. Deferral may also be necessary where occupants are uncooperative, abusive, or threatening. Such insolent behavior on the part of the occupants will not be tolerated and may consequently result in weatherization assistance never being provided.
A dwelling unit should not be weatherized where there is a major code violation or where there is a potentially harmful situation that may adversely affect the occupants, subgrantee staff, or weatherization contract workers. Only after the unit owner corrects the problems, shall weatherization work begin. It is not necessarily the responsibility of the subgrantee to correct such problems. The subgrantee’s Weatherization Coordinator, assessor, or contract assessor must declare his/her intent to defer weatherization on an eligible unit on the Home Energy Assessment Checklist and/or the Health and Safety Inspection Checklist. Either checklist should include the client’s name and address, dates of the audit/assessment and when the client was informed in writing, and a clear description of the problematic condition(s).

The United States Department of Energy (USDOE), however, requires that additional documentation be maintained in the client file whenever deferral is deemed necessary. The Weatherization Deferral Form serves to clearly inform the client of the reason(s) to defer weatherization assistance on his/her home and what actions the client or his/her landlord must undertake to rescind the deferral to permit weatherization assistance to ensue. It is expected in nearly all cases of deferral that the client signs the Weatherization Deferral Form to acknowledge that s/he understands the reasoning for the deferral and what actions must be undertaken to rescind the deferral.

Few circumstances may arise where deferral is a result of insolent behavior or illegal activity. Requiring a client to acknowledge such conditions or activity exist in his/her home by signing the Weatherization Deferral Form may very likely place the party initiating the deferral in a precarious situation. Under absolutely no circumstances does the State of Alabama expect weatherization personnel to place themselves in such risky situations. In cases where weatherization personnel’s safety is compromised, completing the Weatherization Deferral Form should be postponed until the weatherization assessor has time to discuss the case with the weatherization coordinator away from the potentially dangerous environment of the client’s home. In accordance with USDOE’s expectations, though, the client must still be notified for the reason(s) for the deferral. Therefore, the weatherization subgrantee, in these rare but dangerous circumstances, must mail the Weatherization Deferral Form to the client certified mail with return receipt via the United State Postal Service. A copy of the Weatherization Deferral Form and the return receipt must be maintained in the client file to verify due diligence on the part of the weatherization subgrantee was taken to notify the client of the reason(s) for deferral.

Should a client request a second opinion on a deferral, the subgrantee is encouraged to contact its local county health, building, electrical, or other county inspector to request an inspection of the site. Should the client refuse to have a county inspector inspect the dwelling, the weatherization coordinator will note the refusal in the client file, and no weatherization work shall be performed on the dwelling. If the inspector deems that work pending deferral can or should be performed, the weatherization coordinator, assessor, and weatherization contractor are encouraged to work with the inspector’s suggestions to make the improvements. However, the inspector does not make the final determination on the amount, cost of work, or measures applied to the unit. Consequently, the weatherization coordinator may deem the suggested measures to be financially or programmatically out of the scope of Weatherization Assistance Program and may still defer the weatherization work.

A weatherization contractor, too, may encounter a unit to be unfit for weatherization by the time of his/her arrival to perform weatherization work. If this so happens to be the case, the weatherization contractor should not begin work, but instead contact the weatherization coordinator to explain the problematic condition(s). The weatherization coordinator should then follow the same procedures in documenting the deferral as required when a problematic condition necessitating a deferral is discovered during the assessment. The State of Alabama does not require, expect, or encourage weatherization contractors to work in unsafe or unhealthy conditions.
Deferral conditions may include, but are not limited to:

1. The client, or other household member, has known health conditions that prohibit the installation of insulation materials or other weatherization materials.
2. The building structure or its mechanical systems, including electrical and plumbing, are in such a state of disrepair that failure is imminent and the conditions cannot be resolved cost effectively or within the scope of the Weatherization Assistance Program guidance.
3. The house has raw sewage, excessive animal feces, or other sanitation problems that would further endanger the client and weatherization contractors if the weatherization work were performed.
4. The house has been condemned or electrical, heating, plumbing, or other equipment has been “red tagged” by local, county, or state building officials or utilities due to safety or code issues.
5. Moisture problems that are so severe they cannot be resolved under existing health and safety measures or as minor incidental repairs.
6. Dangerous conditions exist due to high carbon monoxide levels associated with combustion appliances which cannot be resolved under existing health and safety measures and guidance.
7. The client is uncooperative, abusive, hostile, or threatening to the assessors, weatherization contractors, inspectors, or others who must work on or visit the home.
8. The extent and condition of lead-based paint in the house would potentially create increased health and safety hazards for both the occupants and crew members.
9. In the judgment of the assessor, if any condition exists which may endanger the health and/or safety of the work crew or subcontractor, then the work should not proceed until the identified condition(s) is satisfactorily corrected.
10. If a mold condition is discovered during the assessment of the home by an assessor and cannot be adequately addressed by the weatherization contractor, the unit will be referred to the appropriate public or non-profit agency for remedial action. Alabama weatherization subgrantees shall defer work on the home until the owner completes mold remediation or another funding source funds and completes the mold remediation. Alabama weatherization subgrantees shall distribute the pamphlet from the U.S. Environmental Protection Agency (EPA), Indoor Environment Division, (IED): “A Brief guide to Mold, Moisture, and Your Home” to all clients whether or not mold is found. The pamphlet can be found at [http://www.epa.gov/mold/pdfs/moldguide.pdf](http://www.epa.gov/mold/pdfs/moldguide.pdf)
11. Client cannot be reached at telephone number on file due to the service being disconnected or due to client unavailability.
12. Client refuses to allow assessors access to all areas of the home necessary to conduct the comprehensive weatherization assessment.
13. Presence of animals which pose a risk to assessors, weatherization contractors, and/or inspectors. The work may be deferred until such animal threats have been secured adequately so that they no longer pose a threat.
14. Unable to gain access to the area to perform work. The work may be deferred until the blocked access is cleared to allow the necessary access to perform the work.
15. The unit is of such filth and squalor or where the presence of excessive hoarding hampers the ability of the assessor or contractor to carry out their weatherization duties.
16. The presence of illicit activity on the premises including but not limited to: illegal drug use; distribution, possession, and/or sale of illegal drugs; prostitution; domestic violence; child abuse; and cruelty to animals. In cases where unlawful activity is witnessed, local authorities are to be notified promptly by the weatherization coordinator. Written documentation explaining the unlawful activity should be maintained in the client file and if possible, without jeopardizing one’s safety, the weatherization personnel may try to obtain photographic documentation of the illicit activity to provide to authorities.
6.0 – HAZARD IDENTIFICATION AND NOTIFICATION FORM(S)

Documentation forms must be developed that include at a minimum: the client’s name and address, dates of the audit/assessment and when the client was informed of a potential H&S issue, a clear description of the problem, a statement indicating if, or when weatherization could continue, and the client(s) signature(s) indicating that they understand and have been informed of their rights and options.

<table>
<thead>
<tr>
<th>Documentation Form(s) have been developed and comply with guidance?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes ☑ No ☐</td>
</tr>
</tbody>
</table>

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 17-06 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 17-06, Grantees must concur, or choose to defer all units where the specific category is encountered.
- “Allowable” items under WPN 17-06 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

<table>
<thead>
<tr>
<th>Concurrence with Guidance ☑</th>
<th>Alternative Guidance ☐</th>
<th>Results in Deferral ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Conditioning Unallowable Measure ☐</td>
<td>Heating Unallowable Measure ☐</td>
<td></td>
</tr>
</tbody>
</table>

The replacement of Air Conditioning and/or Heating Systems must always be evaluated as an Energy Conservation Measure (ECM) first. If evaluation indicates the measure to have Savings to Investment Ratio (SIR) ≥ 1.0 it must be completed as an ECM and charged to Program Operations. When a space conditioning system does not qualify as an ECM, the following conditions must be met before the unit can be replaced or repaired with Health and Safety funds:

- Alabama does permit the installation and repair of heating systems and cooling systems (if “at-risk”) as a health and safety measure if it is not cost-prohibitive. Weatherization subgrantees are afforded the discretion to determine whether the measure is cost-prohibitive based on the health and safety funds available in their budgets. When the measure is cost-prohibitive, the weatherization work should be deferred until alternative resources can be obtained to correct the heating and/or cooling system. The client should always be made aware of any dangers caused by the heating system.
- “Red tagged,” inoperable, or nonexistent primary heating system may be replaced, repaired, or installed where climate conditions warrant, consistent with this guidance.
- Primary air conditioning system replacement, repair, or installation is allowed only in homes where current occupants are considered “at-risk” AND climate conditions warrant. “System” can mean a central unit or several individually operating units; however, when a central unit is in place, it shall be considered the primary unit, and all other units are to be considered secondary.
- Use proper sizing protocols (Manual J, State Approved sizing protocols, NEAT/MHEA outputs, etc.) based on post-weatherization housing characteristics, including installed mechanical ventilation, when installing or replacing a heating or cooling appliance.
- Alabama requires all HVAC system installation to follow local and state code and it must be performed by a licensed HVAC professional. Weatherization subgrantees must require weatherization contractors who are not licensed HVAC companies/individuals subcontract licensed HVAC companies/individuals to perform heating system installations and repairs.

Heating Degree Days (HDD) range from 2,913 HDD in North Alabama to 1,339 HDD in South Alabama. Cooling Degree Days (CDD) range from 2,129 CDD in North Alabama to 3,061 CDD in South Alabama.

Funding

<table>
<thead>
<tr>
<th>DOE ☑</th>
<th>LIHEAP ☐</th>
<th>State ☐</th>
<th>Utility ☐</th>
<th>Other ☐</th>
</tr>
</thead>
</table>

DOE funds may be used to address this category

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

Unsafe or non-functioning primary heating units must be repaired, replaced and removed, or rendered inoperable, or deferral is required.
Non-functioning cooling units may be repaired, or replaced in homes with “at-risk” occupants

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

Replacement or installation of secondary units is not allowed.
Unsafe secondary units, including space heaters, must be repaired, removed, or rendered inoperable, or deferral is required.
See Hazardous Materials Disposal section for more information

Indicate Documentation Required for At-Risk Occupants
An individual who is “At-Risk” as it pertains to this category is any member of the household whose health or well-being would likely be endangered as a result of extreme temperatures. To document and individual’s status as “At-Risk” and therefore eligible to receive this service he/she must supply the Agency with an At-Risk Physician/Nurse Medical Statement. The At-Risk Physician/Nurse Medical Statement is a form completed by the client’s Physician/Nurse verifying that this individual does have a medical condition which can be affected as a result of extreme temperatures.

<table>
<thead>
<tr>
<th>Testing Protocols</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make sure primary systems are present, operable, and performing correctly.</td>
</tr>
<tr>
<td>When replacing a system an audit must be used to determine if the system can be installed as an energy conservation measure (ECM) prior to replacement as an H&amp;S measure.</td>
</tr>
<tr>
<td>If the measure is cost effective by returning an SIR of 1 or greater then it must be replaced and billed as an ECM, if it is not cost effective it should be replaced and billed as a Health and Safety Measure.</td>
</tr>
<tr>
<td>Determine and document presence of “at-risk” current occupants when installing air-conditioning as a Health and Safety (H&amp;S) measure.</td>
</tr>
<tr>
<td>On combustion equipment, inspect chimney and flue and test for Combustion Appliance Zone (CAZ) depressurization.</td>
</tr>
<tr>
<td>For solid fuel appliances look for visual evidence of soot on the walls, mantel or ceiling or creosote staining near the flue pipe</td>
</tr>
<tr>
<td>Minimal standards for remedy include, but are not limited to the following:</td>
</tr>
<tr>
<td><strong>Ducts:</strong></td>
</tr>
<tr>
<td>Ducts testing &lt;1pascal (pa) are considered to be in good condition or within the pressure boundary. Visual inspection of the ducts in site-built houses is required because supplies within the pressure boundary may be leaking into undesirable locations. Return systems should always be sealed as well as possible. Supply leaks nearest the air handler should be addressed in preference to more distant equivalent leaks.</td>
</tr>
<tr>
<td>Clean ducts prior to sealing to ensure that sealing materials adhere and remain effective.</td>
</tr>
<tr>
<td>When sealing ducts with mastic, use fiberglass wrap for the first 3 feet next to the plenum to reinforce the mastic seal.</td>
</tr>
<tr>
<td>Replace crushed registers.</td>
</tr>
<tr>
<td>The return ducts must always be sealed. Return ducts should never be open to a combustion zone. (A worst-case depressurization test should be performed.)</td>
</tr>
<tr>
<td>When working on manufactured mobile homes, ensure that ducts are attached and sealed properly to ensure heat is going into the home and not onto the ground beneath the home.</td>
</tr>
<tr>
<td><strong>Controls:</strong></td>
</tr>
<tr>
<td>Check anticipator settings on gas furnace thermostats and adjust to actual amperage draw.</td>
</tr>
<tr>
<td>Replace thermostats that do not have an anticipator. This does not apply to millivolt systems.</td>
</tr>
<tr>
<td>Install a setback thermostat whenever the client is capable of understanding the technology and is willing to learn how to use it correctly. Install the setback thermostat early in the weatherization process and review its use with the client. Consider making a specific appointment to install the thermostat and instruct the client on its proper use. Follow local and state codes and regulations when installing thermostats.</td>
</tr>
<tr>
<td>Share, with the client, evaluation data that shows the savings potential of using setback behavior even if client does not choose to have a setback thermostat installed.</td>
</tr>
</tbody>
</table>
Furnaces (heating systems):
Check for Gas Leaks
Check the heat exchange for cracks. This should be part of the energy audit process.
Draft Testing, Pre and Post Weatherization
Check Ambient and System CO
Verify combustion air source
Check venting system to insure it is functioning properly
Clean the fan, motor, and exterior of the furnace. Oil the motor.
Clean or replace filters. Talk with the client about continuing and ongoing maintenance, taking into account the client’s understanding, willingness, and convenience.
High flow filters are recommended when replacing filters.
The supply temperature and heat rise should not exceed the appliance rating.
Limit switches must work properly.
The goal of all testing shall be to make sure heating systems are present, operable, and performing safely. Additionally, we want to determine the presence of occupants who may have been exposed to a hazard or danger relating to the system.

Air Conditioners (cooling systems):
Check wiring for burned or frayed wires at unit and disconnect.
Ensure unit has independent outdoor disconnect within sight or 12ft of unit
Check that filter is present and clean.
Ensure safety switches on heat pump wired properly and in working order.

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 H&S 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?
Blower Door Testing when possible Asbestos Containing Materials (ACM) is a major concern which can affect the Health and Safety of the workers and clients. To reduce the likely hood of exposure the general guidelines listed below must be followed.
Pressurized Blower Door testing will be conducted when solid ACM are present in the attic, walls, or on duct work.
If suspected ACM’s are air born no blower door testing will be conducted.
If Suspected ACM’s are in siding on the outside of the home depressurized blower door testing may be conducted as usual.
7.2a – Asbestos - in siding, walls, ceilings, etc.

Concurrence, Alternative, or Deferral

<table>
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<tr>
<th>Concurrence with Guidance ☑</th>
<th>Alternative Guidance ☐</th>
<th>Results in Deferral ☐</th>
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<tbody>
<tr>
<td>Take all reasonable and necessary precautions to prevent asbestos contamination in the home.</td>
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Funding

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How do you address suspected ACM’s in siding, walls, or ceilings that will be disturbed through the course of weatherization work?

General asbestos removal is not approved as a health and safety weatherization cost. The existence of asbestos siding that is in good condition does not prevent installing dense-pack insulation from the exterior. Siding may be removed and reinstalled in order to perform the ECM, and the associated costs may be charged as part of the ECM. All precautions must be taken not to damage the siding. Asbestos siding should never be cut or drilled. Recommended, where possible, to insulate through home interior walls. General abatement of asbestos siding or replacement with new siding is not an allowable H&S cost. Major asbestos problems should be referred to the appropriate state agency and/or EPA.

Testing Protocols

Visually inspect exterior wall surface and subsurface, floors, walls, and ceilings for suspected ACM prior to drilling or cutting. Asbestos Hazard Emergency Response Act of 1986 (AHERA) sample collection and testing must be conducted by a certified tester. It is difficult to tell whether a material contains asbestos simply by looking at it, unless it is labeled. If in doubt, treat the material as if it contains asbestos. Inspect exterior wall surfaces and sub-surfaces for asbestos siding prior to drilling or cutting. Typically, asbestos appears as a whitish, fibrous material which may release fibers that range in texture from coarse to silky. Do not permanently or temporarily replace or remove asbestos siding. Keep activities to a minimum in any areas having damaged material that may contain asbestos. Document and inform the client regarding the damaged material and suspected asbestos. Do not further disturb the material. If necessary, weatherization work to that area may have to be deferred. Do not dust, sweep, or vacuum debris that may contain asbestos. Never saw, sand, scrape, or drill holes in asbestos materials. Asbestos siding should never be cut or drilled. Do not track material that could contain asbestos through the house. Follow EPA and OSHA regulations regarding the safe handling of asbestos to ensure worker and client safety.

Client Education

Inform the client in writing that suspected ACMs are present and what precautions will be taken to ensure the occupants’ and workers’ safety during weatherization. Formally notify client in writing of results if testing was performed.

Training and Certification Requirements

Safe practices for siding removal and replacement. How to identify suspected ACM. Licensing/certification for removal and reinstallation of asbestos siding if required by AHJ.
7.2b – Asbestos - in vermiculite

Concurrence, Alternative, or Deferral

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Take all reasonable and necessary precautions to prevent asbestos contamination in the home.

**Funding**

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DOE funds may be used to address this category

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

When vermiculite is present, assume it contains asbestos unless testing determines otherwise.

Do not perform a blower door test if it will disturb the vermiculite.

If testing determines asbestos is not present blower door testing may be conducted as usual.

Use proper respiratory protection while in areas containing vermiculite.

Encapsulation by an appropriately trained asbestos control professional is allowed.

Removal is not allowed.

When deferral is necessary due to asbestos, occupant must provide documentation that a certified professional performed the remediation before work continues.

---

**Testing Protocols**

AHERA sample collection and testing must be conducted by a certified tester.

Baseline environmental asbestos sampling is an allowable cost.

Do not open any walls to check for vermiculite. Only check for vermiculite in the attic, and if found, leave it undisturbed, when possible.

If it is necessary to go into the attic containing vermiculite insulation, limit the number of trips and the shorten the length of those trips in order to limit any potential exposure and to avoid disturbing the product as any disturbance could potentially release asbestos fibers into the air.

Wear protective equipment when entering an attic area that may contain vermiculite insulation.

Do not track vermiculite insulation or associated dust into the living spaces of the home.

Follow EPA and OSHA regulations regarding the safe handling of asbestos to ensure worker and client safety.

---

**Client Education**

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**

Assessors should be able to recognize vermiculite.

AHERA or state certification to conduct testing.

AHERA or other appropriate asbestos control professional certification/training for encapsulation.
### 7.2c – Asbestos - on pipes, furnaces, other small covered surfaces

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<th>Concurrency, Alternative, or Deferral</th>
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<tr>
<td>Concurrency with Guidance ☑</td>
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</table>

Take all reasonable and necessary precautions to prevent asbestos contamination in the home.

#### Funding

| DOE ☑ | LIHEAP ☐ | State ☐ | Utility ☐ | Other ☐ |

DOE funds may be used to address this category.

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 should be conducted prior to blower door testing if the materials are friable.

Grantee may allow removal by an appropriately trained professional on a case-by-case basis.

The grantee will make a determination based on the cost associated with removal, if the cost is deemed unreasonable the home may have to be deferred until the issue can be addressed.

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

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

Auditors should be able to recognize suspected ACM.

AHERA or other appropriate asbestos control professional certification/training is required to abate the ACM.
## 7.5 – Biologicals and Unsanitary Conditions
(odors, mustiness, bacteria, viruses, raw sewage, rotting wood, etc.)

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<td>Concurrence with Guidance ☑</td>
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<td>Unallowable Measure ☐</td>
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DOE funds may be used to address this category

**What guidance do you provide Subgrantees for dealing with biological and/or unsanitary conditions in homes slated for weatherization?**

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.

See Mold and Moisture section for more information.

### Testing Protocols

- Sensory inspection

### Client Education

- Inform client in writing of observed conditions.
- Provide information on how to maintain a sanitary home.
- When deferral is necessary, provide information in writing describing conditions that must be met in order for weatherization to commence.

### Training

- How to recognize unsafe conditions and when to defer.
- Safe work practices when encountering such conditions.
## 7.6 – Building Structure and Roofing

### Concurrence, Alternative, or Deferral

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<th>Alternative Guidance ☐</th>
<th>Results in Deferral ☐</th>
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Weatherization is not a Rehabilitation Program, if the unit to be weatherized has structural issues beyond the scope of weatherization it must be deferred until the issue is addressed by either other funding or the homeowner.

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DOE funds may be used to address this category

### What guidance do you provide Subgrantees for dealing with structural issues (e.g., roofing, wall, foundation) in homes slated for weatherization?

Site conditions that poses a safety hazard to agency staff or subcontractors which cannot be corrected within the scope of the program may result in a deferral. Building structure & roofing should be evaluated visually so that no existing conditions are disturbed. Structural problems with dwellings often lead to deferral because the scope is beyond the means of the program to treat. Beyond simple incidental repairs, such as roof patching, there is no feasible means to address severe structural defects.

Roof repairs are allowable as a H&S measure if:
- It resolves and bulk water intrusion issue that is the cause of visible biological growth and;
- The H&S roof repair is well documented with written explanation and photos of the biological growth in the client file.

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

When using the Priority Measures Lists incidental repairs are capped at $500.00; if incidental repairs exceed $500.00 then the use of a NEAT/MHEA is required. When using the audit, the incidental repair cost is attributed to the cost of the measure and becomes part of the SIR.

If the cost of the repair causes the measures SIR to drop below 1.0 then the measure cannot be completed and the unit may need to be deferred.

### If priority lists are used, and these repairs are designated as Incidental Repairs, at what point is a site-specific audit required?

According to the Priority Measures List, Incidental Repairs greater than $500.00 require a site-specific audit

### Client Education

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

Assessors are able to identify structural and roofing issues.
## 7.7 – Code Compliance

### Concurrence, Alternative, or Deferral

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DOE funds may be used to address this category

### What guidance do you provide Subgrantees for dealing with code compliance issues in homes receiving weatherization measures?

- 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, cite 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 and properties where “red tagged” H&S conditions exist that cannot be corrected under this guidance must be deferred.

### What specific situations commonly trigger code compliance work requirements for your network? How are they addressed?

- Some AHJ require all code issues be addressed regardless of whether or not the issue is related to weatherization; for example, one AHJ requires all smoke detectors be hard wired, and while we have a variance which does not require that for our program this AHJ still requires this be done. Also, when repairing combustion appliance venting this AHJ requires that the entire vent be replaced not just one section or area repaired. While sometimes there are additional funds that can address these issues that is not always the case. When additional funds are not available homes may be deferred until other funds are available.

### Client Education

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

Assessors should determine what code compliance may be required.
Sub-grantees must be aware of code compliance.
Sub-grantees must ensure that weatherization-related work complies with all applicable codes.

## 7.8 – Combustion Gases

### Concurrence, Alternative, or Deferral

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<th>Concurrence with Guidance</th>
<th>Alternative Guidance</th>
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### Proper venting to the outside for combustion appliances, including gas dryers and refrigerators, furnaces, vented space heaters and water heaters is required.
Correct venting when testing indicates a problem.
If unsafe conditions whose remediation is necessary to perform weatherization cannot be remedied by repair or tuning, replacement is an allowable H&S measure unless prevented by other guidance herein.
Maintain documentation justifying the replacement with a cost comparison between replacement and repair in the client file.
Replacement units must meet safety guidelines as determined in the Grantee Plan or technical Field Guide.
See Air-Conditioning and Heating Systems section and Attachment A for more information.
Funding

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DOE funds may be used to address this category

Testing Protocols

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.

Check DOE-approved audit to determine if the appliance can be justified as an ECM prior to replacement as an H&S measure.

How are crews instructed to handle problems discovered during testing, and what are the specific protocols for addressing hazards that require an immediate response?

Combustion Safety Test Action Levels

<table>
<thead>
<tr>
<th>CO Test Result*</th>
<th>And/ OR</th>
<th>Spillage and Draft Test Results</th>
<th>Retrofit Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-25 ppm</td>
<td>And</td>
<td>Passes</td>
<td>Proceed with work</td>
</tr>
<tr>
<td>26-100 ppm</td>
<td>And</td>
<td>Passes</td>
<td>Recommend that the CO problem be fixed</td>
</tr>
<tr>
<td>26-100 ppm</td>
<td>And</td>
<td>Fails a worst case only</td>
<td>Recommend a service call for the appliance and/or repairs to the home to correct the problem</td>
</tr>
<tr>
<td>100-400 ppm</td>
<td>Or</td>
<td>Fails under natural conditions</td>
<td>STOP WORK: Work may not proceed until the system is serviced and the problem is corrected</td>
</tr>
<tr>
<td>&gt;400 ppm</td>
<td>And</td>
<td>Passes</td>
<td>STOP WORK: Work may not proceed until the system is serviced and the problem is corrected</td>
</tr>
<tr>
<td>&gt;400 ppm</td>
<td>And</td>
<td>Fails under any condition</td>
<td>EMERGENCY: Shut off fuel to the appliance and call for service immediately</td>
</tr>
</tbody>
</table>

Client Education

Provide client with combustion safety and hazards information.

Training

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 ☐ |

DOE funds may be used to address this category

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

Wires are inspected to ensure they are in good condition and not bare or frayed.
Service boxes and junction boxes are inspected to ensure they have secure covers.
Live knob and tube in the attic will not be covered or surrounded.
A dam that does not cover the top will be created to separate insulation from the wire path.
If the wiring is above the joists, an un-faced fiberglass batt must be installed below the wiring.
The balance of the attic may be blown to required insulation depth without covering any knob & tube. If the knob and tube wiring goes through the joists, do not insulate below the wiring, just create the dam. The additional cost of damming K&T wiring will be considered an incidental repair and billed along with the ECM (i.e. insulation).
If the additional cost causes the ECM (i.e. insulation) to no longer be cost effective the home should be deferred until additional funding can be secured to address the K&T wiring issue.
Sidewalls with active knob and tube wiring will not be insulated.

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

When using the Priority Measures Lists incidental repairs are capped at $500.00; if incidental repairs exceed $500.00 then the use of a NEAT/MHEA is required. When using the audit, the incidental repair cost is attributed to the cost of the measure and becomes part of the SIR.
If the cost of the repair causes the measures SIR to drop below 1.0 then the measure cannot be completed and the unit may need to be deferred.

**If priority lists are used, and these repairs are designated as Incidental Repairs, at what point is a site-specific audit required?**

According to the Priority Measures List, Incidental Repairs greater than $500.00 require a site-specific audit

#### Client Education

When electrical issues are the cause of a deferral, provide information to client on over-current protection, overloading circuits, and basic electrical safety/risks.

#### Training

Auditors must be able to identify electrical hazards.
Auditors should be aware of local (or AHJ) code compliance.
### 7.10 – Formaldehyde, Volatile Organic Compounds (VOCs), Flammable Liquids, and other Air Pollutants

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DOE funds may be used to address this category

**What guidance do you provide Subgrantees for dealing with formaldehyde, VOCs, flammable liquids, and other air pollutants identified in homes slated for weatherization?**

Removal of pollutants is allowed and is required if they pose a risk to workers.

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 for more information.

**Testing Protocols**

- Sensory inspection.

**Client Education**

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**

Auditors should be able to recognize potential hazards and when removal is necessary.

### 7.11 – Fuel Leaks

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DOE funds may be used to address this category

**Remediation Protocols**

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.

Test exposed gas lines for fuel leaks from utility coupling into, and throughout, the home.

Conduct sensory inspection on bulk fuels to determine if leaks exist.

**How do you define allowable fuel leak repairs, and at what point are repairs considered beyond the scope of weatherization?**

Fuel leak repairs are allowable when the leak is not severe enough to pose a hazard to the worker or occupant. A leak would be considered beyond the scope of weatherization if it is severe enough to pose a hazard to the worker or occupant.

**Client Education**

Inform clients in writing if fuel leaks are detected.

**Training**

Auditors are trained to conduct fuel leak testing.
### 7.12 – Gas Ovens / Stovetops / Ranges

**Concurrence, Alternative, or Deferral**

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DOE funds may be used to address this category

**What guidance do you provide Subgrantees for addressing unsafe gas ovens/stoves/ranges in homes slated for weatherization?**

When testing indicates a problem, entities may perform standard maintenance on or repair gas cooktops and ovens. Replacement is not allowed.

<table>
<thead>
<tr>
<th><strong>Testing Protocols</strong></th>
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<tbody>
<tr>
<td>Test gas ovens for CO.</td>
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<tr>
<td>Inspect cooking burners and ovens for operability and flame quality.</td>
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<thead>
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<th><strong>Client Education</strong></th>
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</thead>
<tbody>
<tr>
<td>Inform clients of the importance of using exhaust ventilation when cooking and the importance of keeping burners clean to limit the production of CO.</td>
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<thead>
<tr>
<th><strong>Training</strong></th>
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</thead>
<tbody>
<tr>
<td>Auditors are trained on proper testing techniques.</td>
</tr>
<tr>
<td>Auditors are aware of CO action levels listed in Section 7.8 above</td>
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</tbody>
</table>

### 7.13 – Hazardous Materials Disposal

**[Lead, Refrigerant, Asbestos, Mercury (including CFLs/fluorescents), etc.]**

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<td>Concurrency with Guidance ☑</td>
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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.

Refer to Lead and Asbestos sections for more information on those topics.

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DOE funds may be used to address this category

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<th><strong>Client Education</strong></th>
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<tbody>
<tr>
<td>Inform client in writing of hazards associated with hazardous waste materials being generated/handled in the home.</td>
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<thead>
<tr>
<th><strong>Training</strong></th>
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<tbody>
<tr>
<td>Appropriate Personal Protective Equipment (PPE) for working with hazardous waste materials.</td>
</tr>
<tr>
<td>Disposal requirements and locations.</td>
</tr>
<tr>
<td>Health and environmental risks related to hazardous materials.</td>
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<table>
<thead>
<tr>
<th><strong>Disposal Procedures and Documentation Requirements</strong></th>
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</thead>
<tbody>
<tr>
<td>Hazardous Waste Materials generated during weatherization work shall be disposed of according to all local laws, regulations and/or Federal guidelines, as applicable.</td>
</tr>
<tr>
<td>Documentation of proper disposal should be included in client file</td>
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### 7.14 – Injury Prevention of Occupants and Weatherization Workers
(Measures such as repairing stairs and replacing handrails)

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DOE funds may be used to address this category

**What guidance do you provide Subgrantees regarding allowable injury-related repairs (e.g., stairs, handrails, porch deck board)?**

Workers must take all reasonable precautions against work on homes that will subject workers or occupant(s) to health and safety risks. Minor repairs and installation may be conducted only when necessary to effectively weatherize the home; otherwise these types of measures are not allowed. The auditors and workers on a job are to observe if dangers are present that may prevent completion of the weatherization work. Clients must be informed by auditors and/or workers of observed hazards and associated risks.

**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 allowable injury prevention measures are measures that are small in scope but provide additional protection for workers and occupants from potential hazards. Injury prevention measures that cost over $500.00 are not considered minor and are not allowable. Examples of minor allowable injury prevention may include but are not limited to repair/replacing a stair tread, repair/replacing a hand rail, securing attic ladder, etc. This does not allow for installing wheelchair ramps or items that do not relate directly to weatherization work.

**Training**

Auditors are trained in hazard identification.

### 7.15 – Lead Based Paint

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**Safe Work Protocols**

Crews must follow EPA’s Lead; Renovation, 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 house 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.

**Minor Repair or Maintenance Activities:** Activities that will disturb less than the following square feet of paint surfaces in 30 calendar days (counting all paint surface areas of a removed component):

i. 6 square feet per room for interior activities; or
ii. 20 square feet for exterior activities.

But this exemption does **NOT** apply to the following:

i. Window replacement.
ii. Demolition of painted surface areas.
iii. Using any of the following:
• Open-flame burning or torching;
• Machines to remove paint through high-speed operation without HEPA exhaust control; or
• Operating a heat gun at temperatures at or above 1100 degrees Fahrenheit

Mobile Homes. Often, interiors of mobile homes were not painted but rather, paneling was applied to the surfaces. Therefore, pre-1978 mobile homes that were not painted by the manufacturer, occupant, landlord, or past owner of the unit before 1978, may be exempt from LSW. However, Weatherization Programs must verify the areas receiving weatherization services have never been painted or were painted for the first time after 1978. If this is not verifiable, then LSW protocols must be followed. Painted exterior surfaces on pre-1978 units should not be drilled, scraped, sanded, or receive any other work that disturbs the paint.

Testing Protocols

Testing to determine the presence of lead in paint that will be disturbed by WAP measure installation is allowed with EPA-approved testing methods.
LSW must be applied to all pre-1978 housing unless there is existing evidence that the home has been certified as being lead-free or below the lead threshold limit (e.g., for paint containing lead below the regulated level, 1.0 mg/cm² or 0.5% by weight). One of the following methods must be used to determine the paint to be disturbed is not lead-based paint:
- Written determination by certified lead inspector or risk assessor; or
- Proper use of EPA-recognized test kit provided agencies (documenting manufacturer and model of test kit used, description and location of components tested, and test kit results)
- A State-approved lead-based paint test protocol

Testing methods must be economically feasible and justified.
Job site set up and cleaning verification by a Certified Renovator is required.
Grantees must verify that crews are using lead safe work practices during monitoring.

Client Education

Follow pre-renovation education provisions for RRP.
Weatherization subgrantees must provide a copy of the pamphlet, “The Lead-Safe Certified Guide to Renovate Right”, to owners and occupants of a dwelling built before 1978 to inform the household of the potential risk of the lead hazard exposure. Also, subgrantees are required to have the client sign a form confirming receipt of the lead pamphlet and store that form in the client’s file.
If the Weatherization service provider cannot get a client signed acknowledgement, then the form will be signed by agency personnel signifying delivery of that pamphlet.
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.
In 2010, the Alabama Lead Contractor Certification Program received approval from the Alabama State Committee on Public Health to seek EPA authorization to administer and enforce the lead-based paint RRP rules for the State of Alabama in lieu of the EPA. The Renovation Contractor Certification, Chapter 420-3-29, establish requirements for certifying renovators, dust sampling technicians, and renovation firms. Further, these rules establish requirements for renovation project notifications, pre-renovation education requirements, renovation work practices, and for record keeping. Individuals seeking to become Certified Renovators and/or Dust Sampling Technicians in Alabama must apply through Alabama’s Safe State Environmental Program for accreditation.
Grantee Monitors and Inspectors will receive the certified Renovator Certification.
Documentation Requirements

Documentation in the client file must include Certified Renovator certification; any training provided on-site; description of specific actions taken; lead testing and assessment documentation; and, photos of site and containment set up. Include the location of photos referenced if not in file.

Each client file also must contain Lead Safe Weatherization Exemption Worksheet which identifies units which will need to conduct Lead-Safe Work Practices.

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 ☑ | Alternative Guidance ☐ | Results in Deferral ☐ |

Funding

- DOE ☑
- LIHEAP ☐
- State ☐
- Utility ☐
- Other ☐

DOE funds may be used to address this category

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.

Extensive mold removal/cleanup is not an allowable H&S cost.

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.

Visual assessment including exterior drainage. Mold testing is not an allowable cost.

Diagnostics such as moisture meters are recommended pre-weatherization and at the final inspection.

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

Minor allowable moisture related measures may include the repair of small plumbing leaks and or structural leaks which are contributing to mold/moisture issues.

While generally mold removal/clean-up is not allowed areas smaller than 2 sq. ft. inside the unit and areas up to 10 sq. ft. outside may be addressed

Issues beyond these parameters may result in the deferral of the unit until the issues can be addressed by either the homeowner or other funds.

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

Assessors should be able to identify potential or existing mold and/or moisture issues.
How to recognize drainage issues.
### 7.17 – Pests

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**What guidance do you provide Subgrantees for dealing with pests and pest intrusion prevention in homes slated for weatherization?**

Pest removal is allowed only where infestation would prevent weatherization. Infestation of pests may be cause for deferral where it cannot be reasonably removed or poses H&S concern for workers. Screening of windows and points of access, and incorporating pest exclusion into air sealing practices to prevent intrusion is allowed.

**Define Pest Infestation Thresholds, Beyond Which Weatherization Is Deferred**

The threshold for pest infestation is set at $500.00. If the pest infestation cannot be addressed at or below this threshold it is considered beyond the scope of weatherization and the home must be deferred.

**Testing Protocols**

Auditors assess the degree of infestation and risk to worker.

**Client Education**

Inform client in writing of observed condition and associated risks. When deferral is necessary, provide information in writing describing conditions that must be met in order for weatherization to commence.

**Training**

Auditors are trained to assess the presence and degree of infestation, associated risks, and deferral policy.

### 7.18 – Radon

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**What guidance do you provide Subgrantees around radon?**

Radon mitigation is not an allowable H&S cost. In homes where radon may be present, work scope should include precautionary measures based on EPA Healthy Indoor Environment Protocols for Home Energy Upgrades, to reduce the possibility of making radon issues worse. Whenever site conditions permit, cover exposed dirt floors within the pressure/thermal boundary with 6 mil (or greater) polyethylene sheeting, lapped at least 12” and sealed with appropriate sealant at all seams, walls and penetrations. 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.
Testing Protocols
The weatherization program in Alabama will not test for Radon.

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; and 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.
A zonal map can be located at http://www.epa.gov/radon/pdfs/zonemapcolor.pdf

Documentation Requirements
Clients must sign a Radon Informed Consent Form prior to receiving weatherization services. This form must be kept in the client file.

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

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**What is your policy for installation or replacement of the following:**

- **Smoke Alarms:**
  Should be installed on each floor outside sleeping areas if operable alarms are not present.
  Should be installed according to the manufacturer’s instructions.

- **Carbon Monoxide Alarms:**
  Must be installed in every home if operable alarm is not present.
  Should be installed according to manufacturer’s instructions.

- **Fire Extinguishers:**
  May be installed when solid fuel is present.
  Should be installed according to manufacturer’s instructions.

**Testing Protocols**
Check existing alarms for operation.
Verify operation of installed alarms.

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

**Training**
Auditors are trained on where to install alarms.
Auditors should be aware of local (or AHJ) code compliance.
### 7.20 – Occupant Health and Safety Concerns and Conditions

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**What guidance do you provide Subgrantees for soliciting the occupants’ health and safety concerns related to components of their homes?**

All clients are required to sign a Health and Allergy Concerns Form which provides them with information about materials used in weatherization and instructs them to make arrangements so that they are not present during work which may aggravate health issues they may have.

**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?**

An important aspect of any inspection is client education. Once a clear understanding has been reached between the auditor and the client(s), work that will not aggravate any client pre-existing health condition shall begin. In some rare instances, a deferral may be required.

**What guidance do you provide Subgrantees for dealing with potential health concerns when they are identified?**

When a person’s health may be at risk and/or the work activities could create a H&S hazard, the at-risk occupant will be required to take appropriate action based on the severity of the risk. Temporary relocation of at-risk occupants may be necessary. Failure or inability to take appropriate actions will result in a deferral.

**Client Education**

Inform client in writing of any known risks.
Provide client with Subgrantee point of contact information in writing so client can inform of any issues.
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 ✔  No □

### 7.21 – Ventilation and Indoor Air Quality

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**Identify the Most Recent Version of ASHRAE 62.2 Implemented (optional: identify Addenda used)**

The Alabama Weatherization Assistance Program uses ASHRAE 62.2-2016

**Testing and Final Verification Protocols**

ASHRAE 62.2 evaluation to determine required ventilation.
Measure fan flow of existing fans and of installed equipment to verify performance.
Testing to determine ventilation requirements prior to weatherization.
Follow up testing to ensure ventilation requirements were met.
Subgrantees are instructed to use the Residential Energy Dynamics (RED) ASHRAE 62.2-2016 calculator located at [www.residentialenergydynamics.com](http://www.residentialenergydynamics.com)
The use of balanced ventilation systems is encouraged.
### Client Education

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 does not account for high polluting sources or guarantee indoor air quality.

### Training

ASHRAE 62.2 training, including proper sizing, evaluation of existing and new systems.

Subgrantees are instructed to use the Residential Energy Dynamics (RED) ASHRAE 62.2-2016 calculator located at [www.residentialenergydynamics.com](http://www.residentialenergydynamics.com)

### 7.22 – Window and Door Repair and Replacement, Window Guards

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**What guidance do you provide to Subgrantees regarding window and door repair and replacement and window guards?**

Repair using H&S funds is allowed if:

It resolves a bulk water intrusion issue that is the cause of visible biological growth and;

Is well documented with written explanation and photos of the biological growth in the client file.

Replacement of doors and widows is not allowed with H&S funds.

Window and door replacements shall not be included in the air sealing ECM

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

When using the Priority Measures Lists incidental repairs are capped at $500.00; if incidental repairs exceed $500.00 then the use of a NEAT/MHEA is required. When using the audit, the incidental repair cost is attributed to the cost of the measure and becomes part of the SIR.

If the cost of the repair causes the measures SIR to drop below 1.0 then the measure cannot be completed, and the unit may need to be deferred.

### Testing Protocols

N/A

### Client Education

Provide written information on lead risks and mold wherever issues are identified.

### Training

Awareness of guidance.
### 7.23 – Worker Safety (OSHA, etc.)

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Workers must follow OSHA standards where required and take precautions to ensure the H&S of themselves and other workers.

All Subgrantees and contractors must maintain compliance with the current OSHA Hazard Communication Standard, including on-site organized Safety Data Sheets (SDS) (formerly called MSDS).

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**How do you verify safe work practices? What is your policy for in-progress monitoring?**

Grantees must verify that Subgrantees, crews and contractors follow safe work practices.

#### Training and Certification Requirements

- Use and importance of PPE.
- Safety training appropriate for job requirements.
- OSHA 10-hour training meets this requirement and is an allowable use of T&TA funds for Subgrantee Staff and Contractors working in the program
- Ongoing training as required in Hazard Communication Program.