

Weatherization Grantee Health and Safety (H&S) Plan- *Optional Template*

Grantee Name

1.0 – GENERAL INFORMATION

Additional information that does not fit neatly in one of the other sections of this document.

Enter Additional H&S Information Here

2.0 – BUDGETING

Grantees are encouraged to budget H&S costs as a separate category and, thereby, exclude such costs from the Average Cost Per Unit (ACPU) cost limitation. This separate category also allows these costs to be isolated from energy efficiency costs in program evaluations. H&S costs that 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 Grantee's Department of Energy (DOE)-approved energy audit tool.

Select which option used below.

Separate H&S Budget

Contained in Program Operations

3.0 – H&S EXPENDITURE LIMITS

Pursuant to [10 CFR 440.16\(h\)](#), Grantees must establish H&S expenditure limits for their Program and provide justification for those limits by explaining the basis and related historical H&S expenditures. DOE acknowledges that it may be necessary for Grantees to deviate from historical expenditures when certain circumstances arise (e.g., funding source changes).

[10 CFR 440.16\(h\)\(2\)](#) dictates that these limits must be expressed as a percentage of the ACPU. To calculate this percentage, use the following formula:

$$\text{Total Average H\&S Cost per Unit} = \frac{\text{H\&S budget amount}}{\text{Program Operations budget amount}}$$

For example, if the ACPU is \$5,000 and a Grantee's Program expends an average of \$750 per dwelling on energy-related H&S measures, the Total Average H&S Cost per Unit would equal 15 percent. DOE acknowledges that this percentage may vary significantly between Grantees due to different geographical areas and depending upon the availability of other funding sources, resource availability, etc. Low percentages should include a statement of what other funding supports H&S costs, while larger percentages will require greater justification and relevant historical support.

15 percent is not a maximum limit on H&S expenditures. DOE will conduct a secondary level of review on H&S Plans with a Grantee request of more than 15 percent of Program Operations used for H&S purposes. **DOE strongly encourages using the table below in developing justification for the requested H&S budget amount.** In accordance with [10 CFR 440.18\(d\)\(15\)](#), these funds are to be expended by the Program in direct weatherization activities, "of which is necessary before, or because of, installation of weatherization materials." This same section of the regulation excludes the H&S costs from the ACPU limitation if H&S costs are budgeted separately.

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DOE recommends reviewing recent budget requests and compare those to actual H&S 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 annual plan.

H&S expenditure limits and justification explaining the basis for setting the limits.

The actual Health & Safety average expenditure per DOE completion during the period January through December 2023 was 75.166%. The budget is based on 35% of the \$8,497 ACPU.

Utilizing the spreadsheet embedded below, provide a full list of H&S measures using historical data from your program, including average cost, and frequency rate. If installing more than a single instance of one measure in a unit (e.g. multiple CO alarms), Grantees may aggregate costs so that frequency does not exceed 100%, or enter a justification into the measure column, which explains why that measure has a frequency rate of over 100%. The spreadsheet will auto calculate your expected Total Average H&S Cost per Unit.

Instructions: Double-click icon directly below to open, view and edit Measure Matrix Spreadsheet. Complete the spreadsheet by entering the required information. To save, close the spreadsheet and it will save to this document.



Measure Matrix
Final.xlsx

4.0 – INCIDENTAL REPAIR MEASURES

Any measures that could potentially be identified as H&S, but the Grantee chooses to instead identify and treat those measures as incidental repair measures (IRMs), must be implemented consistently throughout the Grantee's weatherization program. The measure must fit the regulatory definition of an IRM and be cost justified along with the associated energy conservation measure and/or package of measures. [10 CFR 440.3](#) defines Incidental Repairs as, "those repairs necessary for the effective performance or preservation of weatherization materials."

H&S measures identified and treated as IRMs within your Program.

Roof repair
Siding repair
Wall & ceiling repair if needed to complete insulation. Wall & ceiling repair will be considered infiltration when needed to stop air flow through interior walls/ceilings.
Foundation repair
Roof, gable and soffit vents
Door and window replacement (if they can be treated as an IRM when meeting IRM guidelines)
Duct sealing outside the thermal boundary (i.e., kneewalls, attics)

5.0 – OCCUPANT PRE-EXISTING OR POTENTIAL HEALTH CONDITIONS AND HAZARD IDENTIFICATION AND NOTIFICATION FORM(S)

Grantees must develop a written policy that includes, at a minimum, the following documentation relating to H&S Plan implementation and maintain signed copies in each client file. Each notification must include the occupant(s) (and landlord if applicable) name and address, be signed and dated by the occupant (and landlord if applicable) indicating that they understand and have been informed of their rights and options and signed by the Subgrantee personnel collecting the information.

Required topics are:

▪ **Occupant Pre-existing or Potential Health Condition Screening**

▪ Provides documentation that allows occupant(s) to self-report known or suspected health concerns as part of initial application for weatherization, during the energy audit, or other part of the weatherization process as specified. Must minimally contain the following:

- Any known risks associated with the measures and materials being installed
- Subgrantee point of contact information for occupant(s)
- Date of screening

▪ **Hazard Identification Notification**

▪ Provides documentation that the occupant and landlord (if applicable), have been informed of any potential hazards identified during the energy audit or intake process. Must minimally contain the following:

- Date(s) of the energy audit/assessment and when the occupant(s) (and landlord, if applicable) was informed of a potential H&S issue
- A clear description of the problem, including any testing results
- A statement indicating if, or when weatherization could continue

Radon Informed Consent Form

▪ Provides documentation that the occupant(s) (and landlord if applicable) have been informed of any potential hazards associated with radon in weatherized dwellings. The form must minimally contain the following:

- An explanation on the potential small risk of increasing radon levels when building tightness is improved. This is based on the results of the [Buildings Assessment of Radon Reduction Interventions with Energy retrofits Expansion Study \(The BEX Study\)](#)
- 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.

Procedure for soliciting occupants’ health and safety concerns related to components of their homes

Agencies must use the Release of Liability Form – Release of Liability and Waiver of Claims, the Health and Safety Assessment Findings Forms, Part 1 & 2, Health and Safety Notification Form and Client Home Energy Audit Forms as part of the health and safety assessment.

Procedure for determining whether occupants suffer from health conditions which may be negatively impacted by the act of weatherizing their dwelling

PRE-EXISTING CONDITIONS:

Because it is possible weatherization activities could have an adverse effect on an occupant’s health, it is important clients provide an “informed consent,” consenting to the weatherization activities before they are started. The Release of Liability form is reviewed with the client at the time of initial home assessment. Agencies must inform all clients weatherization activities can release dust and dust-like particles in the air. Occupants with certain health conditions could have those conditions aggravated by the dust and dust-like particles and should be out of the house when insulation is being blown. Health conditions aggravated by dust include:

- Asthma

- Emphysema
- Allergies
- Respiratory problems
- Pregnancy
- Decreased immune function
- Other serious health conditions

It is also recommended infants less than 12 months old should be out of the house when blown insulation or two-part foam is being installed. Persons who leave the dwelling during the insulation process should remain outside the house for the amount of time specified in the manufacturer's instructions.

Procedure for addressing potential health concerns including pre-existing health conditions when they are identified

Health and safety problems found during the health and safety assessment will result in the agency taking one of three actions

1. If the problem will not prevent the dwelling from being weatherized and installing weatherization measures won't exacerbate the problem, the agency can proceed with weatherizing the dwelling but will notify the client of the problem.
2. If the problem must be remedied before weatherization measures can be installed, the agency must determine if the program can remedy the problem or if the client or landlord will have to correct the problem. If the program can remedy the problem, weatherization can proceed once the agency has corrected the problem.
3. In those cases where the client or landlord is responsible for correcting the problem, the agency must ensure the client understands either he/she or the landlord is responsible for correcting the problem before weatherization can begin. The agency must notify the client of the problem regardless of who is responsible for correcting it.

Health and safety testing must also be repeated after weatherization to ensure the activities did not create a health and safety problem in the home. Program funds may be used to conduct the assessment and testing, and to abate certain health and safety problems.

Location where forms have been uploaded/submitted

Separate attachment to SF424

Separate attachment to H&S Plan

6.0 – HEALTH AND SAFETY CATEGORIES

For each of the following H&S categories identified by DOE in the following tables, follow the directions below.

- Any section that is “Required” below must be explicitly detailed in the H&S Plan regardless of funding source used. If the Grantee checks the box for “Concurrence with DOE Guidance” the contents of the box may be left as it exists or reference the section/location within Grantee Policy and Procedure manual that contains language or insert Grantee specific language. If the “Alternative Guidance” box is checked, the Grantee must provide that alternative guidance in the box.
 - If a Grantee is proposing an alternative action/allowability for a “Required” item, the alternative requires comprehensive explanation of how it meets the intent of the DOE program notice.
 - If a “Required” item/category will not be addressed with any funding source and will always result in deferral, the H&S Plan must state that.
- Any section that is “Allowable” below must be detailed only if DOE WAP funds are used to implement the measures. If the Grantee uses DOE funds for any “Allowable” activities from the Table of Issues then they must be described here in detail, including defining “minor”, “major”, “limited”, “case-by-case”, and “at-risk” if the term is applied. If you only check the box “Allowed with Alternative Funds” then no additional information is required.
- Any section that is “Prohibited” below may not be addressed with DOE WAP H&S funds and does not need to be specifically addressed in the H&S Plan. The Grantee simply needs to check the “Concur with DOE guidance” box and indicate if the condition will result in deferral/referral.
- The Grantee H&S Plan may address additional H&S hazards specific to their program that are not included in the Table of Issues. If a Grantee chooses to include additional measures as DOE WAP funded H&S costs, the H&S Plan must include details pertaining to the measures allowed, testing required, and client education for these specific hazards.
- All required “Testing/Inspection” related items must be documented in the client file to verify completion and results.

6.1 – Air-Conditioning, Heating Systems, and Combustion Appliances

Required Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input checked="" type="checkbox"/>	Alternative Funds <input type="checkbox"/>	
<ul style="list-style-type: none"> • Replace, repair, or install primary heating systems when existing primary heating systems are unsafe, inoperable, or nonexistent. No home may be left without a safe primary heating system after weatherization where climate conditions require heating (i.e., all climate zones except zone 1 as defined by ASHRAE). If unable to meet this requirement, deferral is required. • No DOE-funded weatherization work is permitted if the completed dwelling unit will be heated with an unvented combustion space heater as the primary heat source. The primary heat source must be replaced with a vented unit prior to or by weatherization. The replacement unit must be sized to heat the entire dwelling unit. • Unsafe secondary units, including space heaters, must be repaired, or removed and disposed of, or deferral is required. Secondary unvented space heaters are considered unsafe if they: <ul style="list-style-type: none"> ○ are not listed and labeled as meeting ANSI Z21.11.2; ○ have an input rating of more than 40,000 BTU/hour; ○ are in a bedroom and have an input rating of more than 10,000 BTU/hour; ○ are in a bathroom and have an input rating of more than 6,000 BTU/hour; ○ are operating in an unsafe manner (e.g., high carbon monoxide (CO) readings, too close to combustible materials, lack sufficient combustion air volume); ○ or are not permitted by the Authority Having Jurisdiction (AHJ). • DOE WAP Grantees must comply with the Manufactured Home Construction and Safety Standards which mandates that: <ul style="list-style-type: none"> ○ All fuel-burning appliances in manufactured homes except: ranges, ovens, illuminating appliances, clothes dryers, solid fuel-burning fireplaces and solid fuel-burning stoves, must be installed to provide for the complete separation of the combustion system from the interior atmosphere of the manufactured home (i.e., to draw their combustion air from outside), and be vented to outside the dwelling. ○ All appliances installed by or left in place after weatherization in manufactured homes must meet these standards, including secondary heating sources. If an occupant will not allow the removal of an unsafe combustion appliance from the home, deferral is required. ○ Repair or replace combustion gas venting to ensure proper combustion gas venting to outside the dwelling for all combustion appliances, including but not limited to gas dryers and refrigerators, furnaces, vented space heaters, and water heaters. • If weatherization installs an appliance that is vented into a masonry chimney, the chimney must be lined in compliance with the International Fuel Gas Code (IFGC) or local AHJ if more stringent. • Install adequate combustion air for all combustion appliances left after weatherization. • If permits are required for heating/cooling system work, they must be secured and are a program operation cost if the installation is an ECM or may be included in the H&S cost if installed as a H&S measure. • If unsafe conditions relating to existing combustion appliances require remediation to safely perform weatherization and cannot be remedied by repair or tuning, replacement is an allowable H&S measure unless prevented by other guidance herein. • Documentation justifying the replacement with a cost comparison between replacement and repair must be maintained in the client file. 		
Allowable Actions		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>	

If DOE WAP H&S funds are used for any “allowable” actions, detail them here.

Prohibited Actions

Concur with DOE Guidance

Using DOE WAP H&S funds for replacement or installation of secondary heat sources is prohibited.

Required Testing/Inspection

Concur with DOE Guidance

Alternative Guidance

- Verify that primary heating systems are present, operable, and performing correctly.
- Conduct combustion appliance testing and visual inspection of all combustion appliances and their related venting.
- Depressurization and spillage testing is required for all Category 1 appliances pre- and post-weatherization and before leaving the home on any day when work has been done that could affect draft (e.g., air or duct sealing, adding exhaust ventilation).
- CO testing is required for all combustion appliances, regardless of venting type.
- Verify proper clearances for all combustion venting types
- Visually inspect the entirety of solid fuel-fired appliance installations (e.g., wood stoves, coal stoves, pellet stoves, fireplaces) including the venting system to ensure it adheres to the applicable code or local authority having jurisdiction. Appliances must be inspected pre- and post-weatherization.
- Conduct pre- and post- weatherization worst case CAZ depressurization testing in spaces having a fireplace or woodstove. Since there is no consensus method for verifying safe operation of fireplaces and woodstoves, Grantees can propose testing policies and limits. If the Grantee does not propose a policy and fireplaces or woodstoves are left operational, the vent must meet national or local codes, or the home cannot be weatherized.
- Safety inspections related to space heaters, fireplaces, and woodstoves must include, but not be limited to, verification of adequate floor protection, and code-compliant clearances to walls and other combustible materials.

Grantee Combustion Testing Action Levels

Ambient CO in the dwelling

Zero to eight (8) PPM the audit/inspection may proceed.

- Nine (9) to 35 PPM auditor/inspector must advise client of CO levels and check all possible sources. Open all windows and doors.
- 36 to 69 PPM auditor/inspector must advise client of CO level and turn off all possible sources of CO. Open all windows and doors. After CO returns to acceptable levels, locate the source of the CO and contact appropriate personnel to have repairs completed before proceeding with audit/inspection.
- 70 PPM or greater, auditor/inspector will terminate work immediately and notify client to evacuate the building. Contact local appropriate personnel to remedy situation.

Ambient Air in CAZ

- If at any time ambient air in CAZ exceeds 35 PPM during combustion testing, abort test and exhaust the CAZ.
- After readings drop to below 9 PPM, retest under natural draft conditions.
- If ambient air remains below 9 PPM under natural conditions, weatherization work may proceed, but the issue must addressed.
- If the CAZ ambient air exceeds 9 PPM under natural conditions, the problem must be corrected before any other weatherization work begins

Combustion Safety Test Action Levels

CO Test Result*	And/Or	Spillage Results	Action
0 – 100 ppm	And	Passes	Proceed with work
0 – 100 ppm	And	Fails at worst case only	Repair the problem or recommend service call
> 100 ppm	Or	Fails under natural conditions	<u>Stop Work</u> until system is serviced and problem corrected
> 400 ppm	And	Fails under any condition	<u>Emergency</u> : Shut off fuel to appliance and call for service

**CO measurements for undiluted flue gases at steady state*

Grantee Woodstove & Fireplace inspection/testing policy including actions/limits

Concur with DOE Guidance

Alternative Guidance

Fireplace or woodstove venting that is left operational after weatherization must meet current local or national standards or the home must be deferred.

Required Occupant Education

Concur with DOE Guidance

Alternative Guidance

- Appropriate use and maintenance of units.
- Provide all paperwork and manuals for any equipment installed by weatherization.
- 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 combustion safety and hazards information including how to recognize depressurization, dangers of CO poisoning, and fire risks associated with combustion appliance use.

6.2 – Asbestos (Confirmed and/or Presumed Asbestos Containing Material)

Required Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input checked="" type="checkbox"/>	Alternative Funds <input type="checkbox"/>	
<ul style="list-style-type: none"> When suspected friable Asbestos Containing Materials (ACM) are present, including vermiculite, assume they contain asbestos and take precautionary measures to prevent disturbing it during the audit and work unless testing determines otherwise. Grantees must have written policy included in their H&S plan for: <ul style="list-style-type: none"> Identifying and managing suspected ACM that provides for reasonable and necessary precautions to prevent asbestos contamination in the home. Addressing blower door testing where suspected friable ACM is present (as defined by EPA), including vermiculite. 		
Grantee ACM policy		
<p>1. Homes with insul-brick or slate siding will be presumed to have asbestos.</p> <p>2. EPA and OSHA regulations define asbestos containing materials as material containing 1% or more asbestos. Therefore, if the test results show the vermiculite sample contains less than 1% asbestos, the vermiculite is considered to be non-asbestos containing material and the attic or walls can be insulated.</p>		
Grantee Blower Door Testing Policy When Suspected ACM Exists		
<p>1. A certified Asbestos Building Inspector may, with client permission, remove a piece of the siding from under a porch or some area that will not be visible to send to a lab for testing. If the test results show less than 1% asbestos, the siding may be removed and the house insulated as usual.</p> <p>If the test results show 1% or more asbestos, the following procedures will be implemented.</p> <ul style="list-style-type: none"> The siding can be removed and replaced by an asbestos abatement contractor who has a current permit from the Iowa Division of Labor. The cost of removal/replacement must be included as an additional cost for wall insulation in the NEAT audit. The individual measure SIR must be ≥ 1 or the measure is not eligible. A list of qualified contractors for Iowa can be found at the Iowa Workforce Development website https://www.iowadivisionoflabor.gov/. If slate or insul-brick need to be drilled in order to vent furnaces, water heaters, or exhaust fans, a licensed abatement contractor must complete the work. This work must be bid out to qualified contractors and contractor files with all required insurance, licenses, permits and trainings, etc. must be maintained by the agency. <p>2. Vermiculite testing may be completed at laboratories that are accredited by either the National Voluntary Laboratory Accreditation Program (NVLAP) or by the American Industrial Hygiene Association (AIHA) Laboratory Accreditation Industrial Hygiene Program (IHLAP) for the Field Testing (FOT) of polarized Light Microscopy.</p> <ul style="list-style-type: none"> If vermiculite is present, operate the blower door in the pressurization mode. Test vermiculite for presence of asbestos. If test results indicate there is asbestos in the vermiculite: <ul style="list-style-type: none"> Work required by NEAT that will not disturb vermiculite may be completed. To reduce the risk of moisture, the attic must be properly ventilated (one square foot of venting for every 300 square feet of attic). If the test results indicate there is no asbestos in the vermiculite complete all work required by NEAT. In all cases, a copy of the test results will be provided to the client and maintained in the file. If the client refuses to receive the test results, defer work on the home. 		
Allowable Actions		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>	
If DOE WAP H&S funds are used for any "allowable" actions, detail them here.		
Prohibited Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>		

Using DOE WAP H&S funds for general abatement/removal/or replacement of asbestos siding, thermal system insulation (TSI) or Transite, or vermiculite is prohibited.		
Required Testing/Inspection		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>	Alternative Funds <input checked="" type="checkbox"/>	
<ul style="list-style-type: none"> • Visually inspect all surfaces (i.e., walls, floors, ceilings, roofs) for suspected ACM prior to drilling or cutting. • Assume asbestos is present in suspect materials unless testing reveals otherwise. 		
Allowable Testing/Inspection		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>	
If DOE WAP H&S Funds are used for any "allowable" testing, detail them here.		
Required Occupant Education		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	
<ul style="list-style-type: none"> • Formally notify the occupant, and landlord if applicable, in writing: <ul style="list-style-type: none"> o of suspected ACMs that are present and what precautions will be taken to ensure the occupants' and workers' safety during weatherization; o of results if testing was performed; o not to disturb suspected ACM; o When deferral is necessary due to asbestos, occupant, or landlord if applicable, must provide documentation that a certified professional performed the remediation before work continues. 		

6.3 – Biologicals and Unsanitary Conditions		
Required Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>	Alternative Funds <input checked="" type="checkbox"/>	
Deferral where conditions (odors, bacteria, raw sewage, rotting wood, etc.) in the home pose a health risk to occupants and/or weatherization workers or may be worsened by weatherization activities (e.g., air sealing) and will not be resolved by weatherization.		
Allowed Actions		
Allowed with DOE WAP H&S Funds <input checked="" type="checkbox"/>	Allowed with Alternative Funds <input type="checkbox"/>	
If DOE Funds are used for any "allowable" actions, detail them here.		
Required Testing/Inspection		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input checked="" type="checkbox"/>	Alternative Funds <input type="checkbox"/>	
Any unsanitary conditions, including insect pests, animal or bird feces/carcasses or sewage leakage in the work area must be recorded on the Health & Safety Assessment Findings Form.		
Prohibited Testing/Inspection		
Concur with DOE Guidance <input checked="" type="checkbox"/>		
DOE WAP H&S funds may not be used for testing of materials for biological contaminants.		
Required Occupant Education		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	
Inform occupant in writing of observed biological and unsanitary conditions.		

6.4 – Building Structure and Roofing (e.g., roofing, wall, foundation)		
Allowable Actions		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>	

If DOE WAP H&S Funds are used for any “allowable” actions, detail them here.

Prohibited Actions

Concur with DOE Guidance

Using DOE WAP H&S funds for *major* repairs as defined by Grantee’s H&S Plan.
Using DOE WAP H&S funds for building rehabilitation is prohibited

Define “major” repairs

All non-H&S repairs are included in the NEAT audit SIR. Any repair that the audit will not justify with a cumulative SIR of 1 or greater is considered a major repair and is not permitted.

Required Testing/Inspection

Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>	Alternative Funds <input checked="" type="checkbox"/>	

Visual inspection of building structure and roofing for damages that compromise building durability and to verify that portions of the home where weatherization will occur are safe for entry and performance of assessments, work, and inspections.

Allowable Testing/Inspection

Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>
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If DOE WAP H&S Funds are used for any “allowable” testing, detail them here.

Prohibited Testing/Inspection

Concur with DOE Guidance

Using DOE WAP H&S funds for any testing/evaluation of structural materials by a third-party is prohibited.

Required Occupant Education

Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>
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Notify occupant in writing of structurally compromised areas.

6.5 – Code Compliance

Allowable Actions

Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>
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If DOE WAP H&S Funds are used for any “allowable” actions, detail them here.

Prohibited Actions

Concur with DOE Guidance

- Using DOE WAP H&S funds for correction of preexisting code compliance issues not directly related to the installation of specific weatherization measures in the home is prohibited.
- Using DOE WAP funds for work on condemned properties and properties where H&S conditions exist that cannot be corrected under this guidance is prohibited

Required Testing/Inspection

Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>	Alternative Funds <input checked="" type="checkbox"/>	

Visual inspection.

Allowable Testing/Inspection

Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>
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If DOE WAP H&S Funds are used for any “allowable” testing, detail them here.

Required Occupant Education

Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>
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Inform occupant in writing of observed code compliance issues when it results in a deferral.

6.6 – Electrical

Required Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>	Alternative Funds <input checked="" type="checkbox"/>	
Provide sufficient over-current protection and damming prior to insulating building components containing knob and tube wiring, as required by the AHJ.		
Allowable Actions		
Allowed with DOE WAP H&S Funds <input checked="" type="checkbox"/>	Allowed with Alternative Funds <input type="checkbox"/>	
<ul style="list-style-type: none"> ○ Fuses and breakers are inspected to ensure they are properly sized. ○ If it is determined a hazardous situation exists, the problem must be corrected before weatherization work is started. ○ Enclose all wiring splices inside a location-appropriate (e.g. wet-location, outdoor, indoor, etc.) UL listed electrical enclosure per the NEC. ○ Program funds may be used to correct minor electrical problems but spending must be within the General Health and Safety Repair cost limits. ○ A Department of Public Safety appropriately licensed electrical contractor will be used to perform electrical work needed to correct a problem. ○ Electrical hazards will be eliminated and inspected in accordance with NFPA 70 National Electric Code. <p>Knob & Tube Wiring</p> <ul style="list-style-type: none"> ○ Unless prohibited by local codes, S-type fuses must be installed in homes having knob and tube wiring, to provide over-current protection. ○ If S-type fuses will not work because of overloaded circuits, a new service panel must be installed and the house brought up to code, if applicable, or house must be deferred until service panel is updated. ○ Agencies may use General Health and Safety Repair funds (within limits) to complete this work. Weatherization funds may be used from the weather head or mast down. Service to the weather head is the client's responsibility. <p>Manufactured Homes</p> <ul style="list-style-type: none"> ○ Known electrical problems may be corrected within the General Health and Safety Repair program spending limit. ○ If manufactured home has aluminum wiring, it must be inspected and determined to be safe by a licensed electrician. Aluminum wiring can be a fire hazard if it is corroded, lose, or exposed. Take special care when working in a manufactured home with this type of wiring. ○ Frames of home sections will be bonded with copper wire. ○ Bonding lug will be selected to prevent corrosion due to dissimilar metals. ○ Homes will have a four-wire service entrance to the panel box to ensure a wiring system that is nominally rated at 120/240 volts and allows for proper grounding. ○ Grounding at the service entrance will be checked to determine proper grounding of the home. ○ In units that are receiving insulation measures, electrical wiring and the electrical circuit breaker/fuse box must be assessed for adequacy as follows: #12 aluminum or #14 copper wiring must be protected with 15 amp fusing or breakers. ○ Care must be taken to ensure the electrical wiring was not damaged during insulation work. This can be done by testing electrical outlets and switches following completion of work. 		
Prohibited Actions		
Concur with DOE Guidance <input type="checkbox"/>		
Using DOE WAP H&S funds for <i>major</i> electrical repairs as defined by the Grantee's H&S plan is prohibited		
Define "major" repairs		
Any electrical repair work which exceeds the General Health and Safety Repair fund limit (currently \$3,000) are prohibited		
Required Testing/Inspection		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>	Alternative Funds <input checked="" type="checkbox"/>	

<ul style="list-style-type: none"> Visual inspection for presence and condition of knob-and-tube wiring. Evaluate knob-and-tube wiring for safety prior to work. Check for alterations that may create an electrical hazard. 	
Allowable Testing/Inspection	
Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>
If DOE WAP H&S Funds are used for any "allowable" testing, detail them here.	
Required Occupant Education	
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>
<ul style="list-style-type: none"> Provide occupant with written documentation of any electrical hazards identified that will not be addressed by weatherization Provide information to occupant on over-current protection, overloading circuits, and basic electrical safety/risks if conditions warrant. 	

6.7 – Fuel Leaks		
Required Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input checked="" type="checkbox"/>	Alternative Funds <input type="checkbox"/>	
<ul style="list-style-type: none"> When a gas leak is found on the utility side of service, the utility service must be contacted, work must be temporarily halted, and the leak must be repaired before work may proceed. Fuel leaks that are the responsibility of the occupant (vs. the utility) must be repaired before installing weatherization measures in the home. 		
Allowable Actions		
Allowed with DOE WAP H&S Funds <input checked="" type="checkbox"/>	Allowed with Alternative Funds <input type="checkbox"/>	
If required, fuel leaks will be repaired and inspected in accordance with the most current IRC adopted by authority having jurisdiction or adopted by the State of Iowa (whichever is stricter).		
Prohibited Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>		
<ul style="list-style-type: none"> Using DOE WAP H&S funds to repair leaks that are the responsibility of the utility to correct is prohibited. Using DOE WAP H&S funds for environmental cleanup resulting from bulk fuel leaks is prohibited 		
Required Testing/Inspection		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>	Alternative Funds <input checked="" type="checkbox"/>	
<ul style="list-style-type: none"> Test all exposed gas lines, fittings, valves, and connections for fuel leaks from utility connection to the appliance throughout the home. Test all gas appliances for fuel leaks at all connections, valves, fittings, and burners. Conduct sensory inspection of all bulk fuels lines and storage tanks to determine if leaks exist. 		
Allowable Testing/Inspection		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>	
If DOE WAP H&S Funds are used for any "allowable" testing, detail them here.		
Prohibited Testing/Inspection		
Concur with DOE Guidance <input checked="" type="checkbox"/>		
Using DOE WAP H&S funds for environmental testing of soil or water is prohibited.		
Required Occupant Education		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	
Inform occupants in writing of fuel leak testing results, including specific location if fuel leaks are detected.		

6.8 – Gas Ovens/Stovetops/Ranges

Allowable Actions

Allowed with DOE WAP H&S Funds Allowed with Alternative Funds

If DOE WAP H&S Funds are used for any “allowable” actions, detail them here.

Prohibited Actions

Concur with DOE Guidance

Using DOE WAP H&S funds for replacement of gas ovens/ranges/stovetops is prohibited.

Required Testing/Inspection

Concur with DOE Guidance Alternative Guidance Results in Deferral/Referral

DOE WAP H&S Funds Alternative Funds

- Test gas ovens for CO.
- Grantee H&S plan must define action levels and resulting actions.
- Visually inspect cooking burners and ovens for operability and flame quality.

Define action levels for oven CO testing and resulting actions

1. 100-224 PPM install CO detector and inform the client of the problem. Recommend they have it serviced. Weatherization work may continue.
2. 225 PPM or more, the unit will be repaired or replaced.

Allowable Testing/Inspection

Allowed with DOE WAP H&S Funds Allowed with Alternative Funds

If DOE WAP H&S Funds are used for any “allowable” testing, detail them here.

Required Occupant Education

Concur with DOE Guidance Alternative Guidance

Inform occupants of the importance of using exhaust ventilation when cooking and the importance of keeping burners and broilers clean to limit the production of CO.

6.9 – Hazardous Materials

Required Actions

Concur with DOE Guidance Alternative Guidance Results in Deferral/Referral

DOE WAP H&S Funds Alternative Funds

- Hazardous Waste Materials generated by weatherization work (e.g., refrigerant, asbestos, lead, mercury, CFL lighting bulb/ballasts, etc.) must be disposed of according to all local and federal laws, regulations, and guidelines, as applicable. Costs specifically related to disposal may be charged as a H&S expense.
- Subgrantees must document disposal requirements in contract language with the responsible party.
- **Limited** removal of pollutants that pose a risk to workers is required (e.g., flammable liquids, hazardous chemicals, and other air pollutants) as defined the Grantee’s H&S Plan.
- If removal cannot be performed or is not allowed by the occupant, the unit must be deferred.

Define “limited” removal of pollutants

Inspect the unit to determine whether combustibles or flammable items are around the furnace or gas water heater. If items are within three feet (3’), they need to be removed and the client needs to be notified of this safety problem.

Allowable Actions

Allowed with DOE WAP H&S Funds Allowed with Alternative Funds

If DOE WAP H&S Funds are used for any “allowable” actions, detail them here.

Prohibited Actions

Concur with DOE Guidance

Using DOE WAP H&S funds for Lead, Asbestos, and Radon abatement is prohibited.

Required Testing/Inspection

Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>		Alternative Funds <input checked="" type="checkbox"/>
Sensory inspection.		
Allowable Testing/Inspection		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>	
If DOE WAP H&S Funds are used for any "allowable" testing, detail them here.		
Prohibited Testing/Inspection		
Concur with DOE Guidance <input checked="" type="checkbox"/>		
Using DOE WAP H&S funds for any testing for hazardous materials other than that specifically permitted in the asbestos, lead, and radon sections of this document is prohibited.		
Required Occupant Education		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	
<ul style="list-style-type: none"> • Inform occupant in writing of hazards associated with hazardous waste materials being generated/handled in the home. • Inform occupant in writing of observed hazardous condition and associated risks. • Provide occupant written materials on safety issues and proper disposal of household pollutants. 		

6.10 - Injury Prevention of Occupants		
Allowable Actions		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>	
If DOE WAP H&S Funds are used for any "allowable" actions, detail them here.		
Prohibited Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>		
Using DOE WAP H&S funds for <i>major</i> repairs, as defined by the Grantee's H&S Plan is prohibited		
Define "major" repairs		
All non-H&S repairs are included in the NEAT audit SIR. Any repair that the audit will not justify with a cumulative SIR of 1 or greater is considered a major repair and is not permitted.		
Required Testing/Inspection		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>		Alternative Funds <input checked="" type="checkbox"/>
Visually inspect for dangers that would prevent weatherization.		
Allowable Testing/Inspection		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>	
If DOE WAP H&S Funds are used for any "allowable" testing, detail them here.		
Required Occupant Education		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	
If identified hazardous conditions will not be corrected during weatherization, inform occupant in writing of observed hazards and associated risks utilizing the "Hazard Identification Notification Form" required by WPN 22-7.		

6.11 – Lead-Based Surface Coverings (Paint, Varnishes, Roofing, etc.)		
Required Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>		Alternative Funds <input checked="" type="checkbox"/>

- Subgrantees must comply with EPA's Lead; Renovation, Repair and Painting Program (RRP) rules when working in pre-1978 housing unless testing confirms the work area to be lead free. This includes, but is not limited to:
 - Client file documentation including the Certified Renovator's 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.
 - Certification and training requirements of the RRP rule.
 - Job site set up and cleaning verification by a Certified Renovator.
- Only those costs directly associated with lead safe work practices for surfaces directly disturbed during weatherization activities are allowable WAP H&S expenses.

Allowable Actions

Allowed with DOE WAP H&S Funds <input checked="" type="checkbox"/>	Allowed with Alternative Funds <input type="checkbox"/>
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- DCAA requires all inspectors be Certified Lead Renovators.
- DCAA recommends all energy auditors be Certified Lead Renovators. At a minimum all energy auditors are required to take and pass the lead renovation course.
- DCAA requires all crew supervisors be Certified Lead Renovators. All crew members must take and pass the lead renovator course. DCAA recommends all agency crew members be Certified Lead Renovators.
- DCAA requires all contractors have a Certified Lead Renovator on staff (usually the on-site supervisor), with exceptions as outlined in the *Iowa Weatherization Program Policies and Procedures Manual, Section 9.32*.
- As a part of the requirements by Iowa Department of Health and Human Services, Bureau of Environmental Health Services, Iowa requires the completed lead reporting forms, including the assurance that Renovate Right is distributed to clients, be in the client files.

Prohibited Actions

Concur with DOE Guidance

- Using DOE WAP H&S funds for lead abatement is prohibited.
- Using DOE WAP H&S funds for purchase, resourcing, or maintenance of X-ray Fluorescence (XRF) devices is prohibited.

Allowable Testing/Inspection

Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>
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If DOE WAP H&S Funds are used for any "allowable" testing, detail them here.

Required Occupant Education

Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>
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Follow pre-renovation education requirements per EPA RRP rules.

6.12 – Mold and Moisture

Allowable Actions

Allowed with DOE WAP H&S Funds <input checked="" type="checkbox"/>	Allowed with Alternative Funds <input type="checkbox"/>
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Plumbing Repair

- o Leaking water pipes and sewer lines may cause moisture problems within the house.
- o Minor repairs may be made to water pipes and sewer lines within spending limits, but cleanup of any unsanitary conditions due to plumbing leaks is the sole responsibility of the client.

Sump Pumps

- o Sump pumps may be installed to control water in lower levels of the home.
- o Sump pumps must be installed to meet manufacturer’s instructions and all local codes.
- o Interior grading will be sloped to sump pump, if possible.
- o Sealed covers must be installed on sump pumps pits as described in Section 2073.05 of the *Iowa Weatherization Assistance Program Work Standards Manual*.
- o SHPO review is required for new sump pit installation where one did not previously exist.

Dehumidifiers

Dehumidifiers may be installed, with client permission, to help control humidity in basements during summer months in homes with existing mold or moisture problems.

- o Explain to the client that the dehumidifier might result in an increase in electric usage.
- o All moisture source control methods must have been exhausted before installing a dehumidifier.
- o Manufacturer specifications will be followed for size and use.
- o Dehumidifiers must be ENERGY STAR® rated and installed to drain properly.
 - If a drain does not exist, a dehumidifier may be installed by utilizing a dedicated condensation pump to an existing drain or sewer line.
 - In this case, the dehumidifier must be put up on blocks to allow for proper drainage.
 - If the basement area is divided in separate rooms, drying will be provided to all basement areas.
- o Educate the client on proper usage of the dehumidifier including settings and summer/winter use.
- o Occupant will be educated on how and when to change filter and clean condensate drain of the dehumidifier in accordance with manufacturer specifications.

Site Drainage

- o Poor site drainage is often the reason for wet foundations, basements, crawlspaces, and slabs.
- o The ground around the foundation of the house should be sloped away from the house so water runs away from the house and not toward it.
- o Ideally, the ground adjacent to the foundation should have a minimum 5% slope away from the house (six inches of fall in the first 10 feet).
- o Check for the following site drainage situations:
 - Does the site direct rain and snow melt toward the foundation rather than away from it?
 - Are there depressions in the ground close to the house where water can collect?
 - Are sidewalks or paved driveways sloped so they direct water toward the foundation rather than away from it?
 - Does the house have an effective gutter/downspout system that collects and drains rain water away from the foundations?

Gutters and Downspouts

- o Gutters and downspouts can be an important part of solving a site drainage problem.
- o Agencies should note if the house has an existing effective gutter/downspout system.
- o If the gutter system is in good condition, but is clogged with debris, they may be cleaned by the program if client is physically unable to do the job and all other options (such as family or chore services) have been exhausted.
- o The cleaning can only be done at the time of weatherization services and cannot be repeated as needed. See Section 2073.03 of the *Iowa Weatherization Assistance Program Work Standards Manual* for more information on Gutters and Downspouts.

Prohibited Actions

Concur with DOE Guidance

- Using DOE WAP H&S funds for mold cleanup is prohibited.
- Using DOE WAP H&S funds for window and door replacements is prohibited

Required Testing/Inspection

Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>		Alternative Funds <input checked="" type="checkbox"/>
Visual assessment for moisture or mold damage including exterior drainage.		
Allowable Testing/Inspection		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>		Allowed with Alternative Funds <input checked="" type="checkbox"/>
If DOE WAP H&S Funds are used for any "allowable" testing, detail them here.		
Prohibited Testing/Inspection		
Concur with DOE Guidance <input checked="" type="checkbox"/>		
Using DOE WAP H&S funds for mold testing of any type is prohibited.		
Required Occupant Education		
Concur with DOE Guidance <input checked="" type="checkbox"/>		Alternative Guidance <input type="checkbox"/>
Provide occupant written notification of identified mold/moisture hazards and information regarding the associated hazard.		

6.13 - Occupant Pre-existing or Potential Health Conditions

Required Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>		Alternative Funds <input checked="" type="checkbox"/>
<ul style="list-style-type: none"> When a person's health may be at risk and/or WAP work activities could constitute an H&S hazard, the occupant is required to take appropriate action based on severity of risk. Deferral, if occupant risk cannot be mitigated. 		
Allowable Actions		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>		Allowed with Alternative Funds <input checked="" type="checkbox"/>
If DOE WAP H&S Funds are used for any "allowable" actions, detail them here.		
Required Testing/Inspection		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>		Alternative Funds <input checked="" type="checkbox"/>
<ul style="list-style-type: none"> Screen occupants for known or suspected health concerns either as part of initial application for weatherization, during the audit, or both. This is done utilizing the "Occupant Pre-existing or Potential Health Condition Screening Form" required by WPN 22-7. 		
Allowable Testing/Inspection		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>		Allowed with Alternative Funds <input checked="" type="checkbox"/>
If DOE WAP H&S Funds are used for any "allowable" testing, detail them here.		
Required Occupant Education		
Concur with DOE Guidance <input checked="" type="checkbox"/>		Alternative Guidance <input type="checkbox"/>
<ul style="list-style-type: none"> Inform occupant in writing of any known risks and provide pre-weatherization screening form. Provide occupant with Subgrantee point of contact information in writing. 		

6.14 – Pests

Required Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>		Alternative Funds <input checked="" type="checkbox"/>
Deferral of homes where infestation of pests cannot be reasonably removed or poses H&S concern for workers.		
Allowable Actions		
Allowed with DOE WAP H&S Funds <input checked="" type="checkbox"/>		Allowed with Alternative Funds <input type="checkbox"/>

Pest Control	
<ul style="list-style-type: none"> ○ Pest removal/extermination is only allowed in cases when weatherization would be deferred otherwise. If pests cannot be reasonably removed, or where removal poses a safety concern for workers, work should be deferred on the house. ○ If necessary, pest and termite treatment will be completed before crawl space upgrade. 	
Allowable Testing/Inspection	
Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>
If DOE WAP H&S Funds are used for any "allowable" testing, detail them here.	
Required Occupant Education	
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>
Inform occupant in writing of observed conditions and associated risks.	

6.15 – Radon		
Required Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input checked="" type="checkbox"/>	Alternative Funds <input type="checkbox"/>	
<ul style="list-style-type: none"> ● Cover exposed dirt floors within the pressure/thermal boundary with a sealed soil gas retarder ● Cover sump well/pits with airtight covers ● Implement ventilation as required by ASHRAE 62.2-2016 		
Allowable Actions		
Allowed with DOE WAP H&S Funds <input checked="" type="checkbox"/>	Allowed with Alternative Funds <input type="checkbox"/>	
Soil-Gas Retarder		
<ul style="list-style-type: none"> ● Debris that may cause injury or puncture ground covers (e.g., nails, glass, sheet metal screws) must be removed from the crawlspace and disposed of properly. ● Soil-gas retarder must be 6-mil thick polyethylene. When seams exist, they will be overlapped a minimum of 12" and sealed using caulk, mastic, or house-wrap tape. The sealant must be compatible with the vapor barrier. See Section 4010 ● A vapor barrier, covering 100% of the exposed crawl space floor, will be installed and sealed to the wall's air and moisture barrier. Soil-gas retarder will be fastened to ground to prevent movement in accordance with ASTM E1643 and manufacturer's recommendations. ● The soil-gas retarder should extend up to 6" below the sill plate and be secured, unless two-part foam or rigid foam board is to be used for insulation. ● For wall to floor connection, the wall moisture barrier will be installed under the ground vapor retarder. ● Care must be taken not to tear the polyethylene. ● Install a durable (minimum of 10-year service life), easily seen sign. 		
Sump Pumps		
<ul style="list-style-type: none"> ● Sump pumps may be installed to control water in lower levels of the home. ● Sump pumps must be installed to meet manufacturer's instructions and all local codes. ● Interior grading will be sloped to sump pump, if possible. ● Sealed covers must be installed on sump pumps pits as described in Section 2073.05 of the <i>Iowa Weatherization Assistance Program Work Standards Manual</i>. 		
ASHRAE		
<ul style="list-style-type: none"> ● ASHRAE 62.2 2016 is required on every home. ● The most recently adopted ASHRAE 62.2 will be used when determining ventilation requirements. 		
Prohibited Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>		
Using DOE WAP H&S funds for radon mitigation is prohibited.		
Allowable Testing/Inspection		

Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>
If DOE WAP H&S Funds are used for any "allowable" testing, detail them here.	
Required Occupant Education	
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>
<ul style="list-style-type: none"> • Provide all occupants EPA's A Citizen's Guide to Radon and inform them of radon related risks. • Occupants must sign an informed consent form prior to receiving weatherization services. 	

6.16 – Safety Devices: Smoke and Carbon Monoxide Alarms, Fire Extinguishers		
Required Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input checked="" type="checkbox"/>	Alternative Funds <input type="checkbox"/>	
Install CO alarms in every home where alarms are not present or are inoperable in compliance with ASHRAE 62.2-2016 which references NFPA 720 (note: NFPA 720 has been incorporated into NFPA 72).		
Allowable Actions		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input type="checkbox"/>	

CO Alarms

See Section 2060 of the *Iowa Weatherization Assistance Program Work Standards Manual* for more information about the installation of carbon monoxide, smoke, and propane alarms.

- Carbon monoxide alarms are to be installed between 4’ and 6’ from the floor.
- CO alarms installed by the program must have internal non-replaceable batteries.
- When installing new alarms, old existing alarms in the same area must be removed
- Do not install the alarm in the following areas:
 - Near bathrooms or in shower areas
 - In closets
 - Crawlspace or unheated areas where extreme hot or cold temperatures occur
 - Within five feet of fuel burning appliances
 - Close to adjacent walls or in corners
 - Near bathtubs or basins
 - Directly above or below return air registers
 - Behind drapes, furniture, or other objects that could block air-flow to the CO alarm
- Alarms must meet UL2034 standards. Alarms should be warranted for a minimum of TEN (10) years.
- Installed alarms must be labeled with the expiration date, as warranted by the manufacturer, written on the front of the mounting plate or back side of alarm in permanent ink or on the label provided on the alarm.

Smoke Alarms

See Section 2060 of the *Iowa Weatherization Assistance Program Work Standards Manual* for more information about the installation of carbon monoxide, smoke, and propane alarms.

- Every house must have working smoke alarms on each level. Alarms may be purchased and installed using program funds. Alarms must be installed as required by NFPA 72/local codes, whichever is more stringent, for single family residences.
- If a home is determined to be incomplete, at the time of audit, smoke alarms can be installed and paid for with program funds.
- Areas that alarms should be installed:
 - Each level of the home
 - Install on basement ceiling level near basement stairs
 - Install in all bedrooms
 - Install within 15 feet of rooms used for sleeping purposes
 - Install on hall ceiling or 4” – 12” down on wall centered as possible between bedrooms
 - Install in rooms having a space heater
 - Avoid placement near kitchen stoves or bathroom showers
 - Exclude unoccupied attics

Propane Alarms

See Section 2060 of the *Iowa Weatherization Assistance Program Work Standards Manual* for more information about the installation of carbon monoxide, smoke, and propane alarms.

- Propane alarms are required by weatherization in all houses using propane.
- Manufactured homes are exempt from this rule.
- There are different types of propane gas alarms – some are just alarms which sound when a leak is detected, others actually shut down the flow of gas into the house. The weatherization program will pay for propane alarms that detect the leak.
- All propane alarms must be connected to electricity, an outlet must be installed if necessary.
- Alarms are to be installed according to the manufacturer’s instructions and meet the proper UL listing.
- LP alarms must be installed near the furnace or other propane appliances within 12 - 24” of the floor.

Prohibited Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>		
Using DOE WAP H&S funds for replacement of functional smoke or CO alarms that are not beyond the manufacturer’s stated lifetime is prohibited.		
Required Testing/Inspection		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>

DOE WAP H&S Funds <input type="checkbox"/>	Alternative Funds <input type="checkbox"/>
Verify operation and age of installed alarms.	
Allowable Testing/Inspection	
Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>
If DOE WAP H&S Funds are used for any "allowable" testing, detail them here.	
Required Occupant Education	
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>
Provide occupant with verbal and written information on use of newly installed devices and the potential risks of not properly maintaining these devices.	

6.17 – Ventilation and Indoor Air Quality		
Required Actions		
Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>		Alternative Funds <input checked="" type="checkbox"/>
Install ventilation as required by ASHRAE 62.2 - 2016. If occupant refuses ventilation as required by ASHRAE 62.2, the home must be deferred.		
Allowable Actions		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>		Allowed with Alternative Funds <input checked="" type="checkbox"/>
If DOE WAP H&S Funds are used for any "allowable" actions, detail them here.		
Required Testing/Inspection		
Concur with DOE Guidance <input type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>		Alternative Funds <input type="checkbox"/>
<ul style="list-style-type: none"> ASHRAE 62.2 evaluation to determine required post-weatherization ventilation. Measure fan flow of existing fans and of installed equipment to verify performance. 		
Allowable Testing/Inspection		
Allowed with DOE WAP H&S Funds <input checked="" type="checkbox"/>		Allowed with Alternative Funds <input type="checkbox"/>
If DOE WAP H&S Funds are used for any "allowable" testing, detail them here.		
Required Occupant Education		
Concur with DOE Guidance <input checked="" type="checkbox"/>		Alternative Guidance <input type="checkbox"/>
<ul style="list-style-type: none"> Provide occupant with information on function, use, and maintenance (including location of service switch and cleaning instructions) of ventilation system and components. Provide occupant with equipment manuals for installed equipment. Include disclaimer that ASHRAE 62.2 does not account for high polluting sources or guarantee indoor air quality. 		

6.18 – Water Heaters	
<i>(see Combustion Appliances for combustion related requirements)</i>	
Allowable Actions	
Allowed with DOE WAP H&S Funds <input checked="" type="checkbox"/>	Allowed with Alternative Funds <input type="checkbox"/>

See Section 2024 of the *Iowa Weatherization Assistance Program Work Standards Manual* for more information about water heaters.

- All combustion water heaters must be properly vented before proceeding with any weatherization work.
- Any water heater which cannot be properly vented must be replaced.
- Determine if the gas valve is working properly. If not, replace the valve or the water heater, whichever is most cost effective
- Determine if the tank is leaking. If it is leaking, it should be determined if it is a health and safety concern and should be replaced.
- Determine whether a temperature pressure relief valve and a discharge pipe are present. If the relief valve and/or the discharge pipe are not present and there is an existing location for them, determine whether it could be a safety concern and install if needed.
- Examine the plumbing to determine if there are leaks. If leaks exist, they may be repaired within program limits for General Health & Safety repairs.
- A water heater should not be replaced solely on the basis of its age. The age of a water heater does not provide an accurate indication of whether it should be replaced.
- When a water heater is replaced, document the reason for the replacement in the file.

Required Testing/Inspection

Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>	Alternative Funds <input checked="" type="checkbox"/>	
<ul style="list-style-type: none"> • Visual inspection of all water heaters and related piping for safety and leaks • See Combustion Appliances section for related combustion safety testing requirements. 		

Allowable Testing/Inspection

Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>
If DOE WAP H&S Funds are used for any "allowable" testing, detail them here.	

Required Occupant Education

Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>
<ul style="list-style-type: none"> • 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. 	

6.19 – Worker Safety

Required Actions

Concur with DOE Guidance <input checked="" type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>	Alternative Funds <input checked="" type="checkbox"/>	
Adherence to all federal, state, and local worker safety regulations (e.g., OSHA, EPA).		

Allowable Actions

Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>
<ul style="list-style-type: none"> ○ All agencies are required to have an agency-wide Health and Safety Plan as outlined by OSHA which must incorporate these guidelines. ○ All on-site weatherization workers, including Energy Auditors, crews, contractors, and Inspectors are expected to follow OSHA safe work practices, confined spaces, as well as any practices spelled out in these standards. ○ All materials will be handled in accordance with manufacturer specification or Safety Data Sheets (SDS) standards to eliminate hazards associated with volatile organic compounds (VOCs), sealants, insulation, contaminated drywall, dust, foams, asbestos, lead, mercury, and fibers. ○ Appropriate personal protective equipment (PPE) will be provided to agency staff. ○ Workers will be trained on how to use PPE. Workers will be expected to always use appropriate PPE during work. 	

Prohibited Actions

Concur with DOE Guidance <input checked="" type="checkbox"/>	
Using DOE WAP H&S funds for <i>major</i> repairs as defined by the Grantee's H&S Plan is prohibited.	
Define "major" repairs	
All non-H&S repairs are included in the NEAT audit SIR. Any repair that the audit will not justify with a cumulative SIR of 1 or greater is considered a major repair and is not permitted.	
Allowable Testing	
Allowed with DOE WAP H&S Funds <input type="checkbox"/>	Allowed with Alternative Funds <input checked="" type="checkbox"/>
If DOE WAP H&S Funds are used for any "allowable" testing, detail them here.	

6.X – (Insert Additional H&S Items for Use of DOE WAP H&S funds)

Required Actions		
Concur with DOE Guidance <input type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>		Alternative Funds <input type="checkbox"/>
Insert required item text		
Allowable Actions		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>		Allowed with Alternative Funds <input type="checkbox"/>
If DOE WAP H&S Funds are used for any “allowable” actions, detail them here.		
Prohibited Actions		
Concur with DOE Guidance <input type="checkbox"/>		
What is prohibited		
Required Testing/Inspection		
Concur with DOE Guidance <input type="checkbox"/>	Alternative Guidance <input type="checkbox"/>	Results in Deferral/Referral <input type="checkbox"/>
DOE WAP H&S Funds <input type="checkbox"/>		Alternative Funds <input type="checkbox"/>
Insert required item text		
Allowable Testing/Inspection		
Allowed with DOE WAP H&S Funds <input type="checkbox"/>		Allowed with Alternative Funds <input type="checkbox"/>
If DOE WAP H&S Funds are used for any “allowable” testing, detail them here.		
Prohibited Testing/Inspection		
Concur with DOE Guidance <input type="checkbox"/>		
What is prohibited		
Required Occupant Education		
Concur with DOE Guidance <input type="checkbox"/>		Alternative Guidance <input type="checkbox"/>
Insert required item text		