# Weatherization Grantee Health and Safety Plan

# *New Mexico Health and Safety Plan*

## ☑ POLICY SUBMITTED WITH PLAN

## 1.0 – GENERAL INFORMATION

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

## 2.0 – BUDGETING

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

Select which option is used below.

| | |
|---|---|
| Separate Health and Safety Budget ☑ | Contained in Program Operations ☐ |

## 3.0 – HEALTH AND SAFETY EXPENDITURE LIMITS

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

*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 expenditure 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 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 recommended 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.*

*WPN 22-7 reinforces the requirement that all H&S expenditures are documented in each client file with the specific reason, cost, and funding source and clarifies that client education materials and H&S related training are not allowable H&S expenses but are Training and Technical Assistance budget items.*

Agencies are expected to budget for health and safety funds to allow for all allocated units within the program year to receive weatherization. Agencies must keep their per unit average for health and safety below $1534.94.
For health and safety costs that are estimated to be greater than $3,500, agencies must obtain prior approval from MFA prior to proceeding with work.

## 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 means those repairs necessary for the effective performance or preservation of weatherization materials.

Incidental repairs include:

- Glass replacement
- Door Replacement
- Structural repairs to maintain the integrity of weatherization materials.
- Skirting for mobile homes
- Flue and venting replacement
- Dryer vents
- T and P for water heaters
- Fuel supply line repair
- Electrical repairs
- Modifications to allow condensing furnace drainage.
- Minor roof repair <12 square feet
- Cover for evaporative coolers.
- Lock latch
- Wall repair
- Electrical costs for fan installation
- Thermostats
- Electrical panel upgrade for heat pumps

Health and safety measures may be listed as incidental repair only if the entire building still receives an SIR of 1 and this decision may not be made in the field. Incidental repairs are included in the per unit cost limitation and must be cost justified with the SIR for the package of measures. If incidental repairs are so exhaustive that the building no longer receives a cumulative SIR of 1, the agency may use weatherization readiness funds for the item that causes the high costs of IR.

General heat waste measures are included in the energy audit as itemized costs and do receive an SIR above 1.

Items that have the potential of receiving an SIR on their own, such as doors, must be run as an ECM first. When the item is not cost effective, then it must be run under air sealing if it would normally be an incidental repair to air sealing. Otherwise, the item may be run as an incidental repair if the entire home receives an SIR above 1. For all HVAC units, the agencies must run the item as an ECM first and exhaust all potential eligible leveraged funding sources to determine if an SIR of 1 is achieved prior to using H&S funds.

## 5.0 – Deferral/Referral Policy

*Deferral of services may be necessary if H&S issues cannot be adequately addressed according to WPN 22-77 guidance. The decision to defer work in a dwelling is difficult but necessary in some cases. This does not mean that assistance will never be available, but that work must be postponed until the problems can be resolved and/or alternative sources of help are found. If, in the judgment of the auditor, any conditions exist which may endanger the health and/or safety of the workers or occupants, the unit should be deferred until the conditions are corrected. Deferral may also be necessary where occupants are uncooperative, abusive, or threatening. Grantees must be specific in their approach and provide the process for clients to be notified in writing of the deferral and what conditions must be met for weatherization to continue. Grantees must also provide a process for the client to appeal the deferral decision to a higher level in the organization.*

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

Yes ☑ No ☐

Where can this deferral/referral policy be accessed?

The Administration Manual, Section 6. This resides on the Grantee website and is also distributed to the Service Providers annually or when there are updates.

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## 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.*

Documentation Form(s) have been developed and comply with guidance?

Yes ☑ No ☐

## 7.0 – Health and Safety Categories

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

- *Explain whether you concur with existing guidance from WPN 22-77 and how that guidance will be implemented in your Program, if you are proposing an alternative action/allowability, or if the identified category will not be addressed and will always result in deferral. Alternatives must be comprehensively explained and meet the intent of DOE guidance.*
- *Where an Action/Allowability or Testing is "required" or "not allowed" through WPN 22-77, Grantees must concur or choose to defer all units where the specific category is encountered.*
- *"Allowable" items under WPN 22-77 leave room for Grantees to determine if the category, or testing, will be addressed and in what circumstances.*
- *Declare whether DOE funds or alternative funding source(s) will be used to address the 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 Programs. Additional categories must include, at a minimum, all the same data fields as the DOE-provided categories. Two additional tables have been created to utilize.*

### 7.1 – Air Conditioning and Heating Systems

| Concurrence, Alternative, or Deferral | | |
|---|---|---|
| Concurrence with Guidance ☑ | Alternative Guidance ☐ | Results in Deferral ☐ |

| | | | | |
|---|---|---|---|---|
| Air Conditioning Unallowable Measure ☐ Heating Unallowable Measure ☐ | | | | |
| **Funding** | | | | |
| DOE ☑ | LIHEAP ☑ | State ☑ | Utility ☑ | Other ☑ |
| | | | | |
| **How do you address unsafe or non-functioning primary heating/cooling systems?** | | | | |

**Heating Systems**

**All homes must contain a safe, operable, primary heating system for the entire dwelling unit after weatherization is complete.**
System repair, replacement, or installation is allowed of red-tagged, inoperable, or nonexistent heating systems in all climate zones.

- Manual J must be used for sizing the equipment when replacing.
- Flue and chimney inspection for code
- Complete testing consistent with the NM Technical Standards testing protocol within the CAZ.
- Depressurization consideration in conjunction with other combustion appliances in worse case and natural conditions.
- Inspection and testing procedures for solid fuel appliances (i.e., woodstoves and fireplaces) include requirements that Grantees have specific testing policies and action levels.
- Solid fuel burning appliances must:
    - Adhere to local code including the venting.
    - Include a CO alarm installed in the combustion zone.
    - Client education and danger signs of what to do if the alarm were to sound.
    - Worst case of CAZ depressurization testing
    - Be simulated at 300 CFM for worse case testing of other appliances.
    - Replacement is allowed for primary units but not secondary units.
- Repair and replacement of inoperable or unsafe combustion appliances is allowed, including the installation of direct-vent, sealed combustion appliances.
    - Repair and cleaning should be done before replacement is considered.
    - Proper venting to the outdoors, including gas dryers, is required.
        - Correction of venting is allowed when testing or visual inspection indicates a problem.
        - This may be listed under incidental repair when it meets the definition of WPN 12-9.
- No work is permitted if the completed unit's primary heat source is an unvented gas heater. Replacement with a vented unit is an allowable H & S expense.
    - Unit must be sized to heat entire dwelling unit. And comply with the audit requirements of 10 CFR 440.21 (e) (2)
- **Building permits must be secured and other applicable building codes followed for all space heater work**. This is considered a program operation cost per 17-7 Attachment A.

All fuel-burning appliances in mobile 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).

- Masonry chimneys used by vented space heaters will be properly lined in compliance with the International Fuel Gas Code (IFGC). New equipment must meet local code requirements.

**Cooling Systems**

Before cooling units are installed as a H&S measure, the agency must determine that enough funds are available in the H&S budget to allow for the installation or replacement of a unit. If there is no room in the budget, the agency may make a determination on whether to defer the unit if it is believed future funding will allow for the measure.

Air conditioning system replacement, repair, or installation is allowed in homes of at-risk occupants or where climate conditions are warranted. Climate conditions that would warrant this allowance are areas that have an average of 800 CDDs or higher using a base 70. If weather data is unavailable the agency must use the weather file or data that most closely resembles the climate of the potential replacement. For other towns or areas with less than 800 CDD, medical eligibility from a third-party medical professional proving at risk is required for any occupant.

At risk, occupants are defined as an occupant that is over the age of 60, has respiratory ailments, allergies, pregnancy, or other unique health concerns. The cooling system must be run as an ECM first to determine if the unit is cost effective and Manual J must be used for the sizing of equipment.
Service Providers must provide T&TA to clients when installing a cooling unit when no previous unit existed.
An example statement of medical eligibility:
Re: Air Conditioner Replacement or Installation

Name: _____, DOB: _____, age _____ years, is a patient under my care. S/he has a respiratory condition that increases her/his risk for heat-related illness during a heat wave.
As her/his health care provider, I strongly advise that s/he use an air conditioner at home during a heat wave to prevent serious heat-related illness and possibly death. If you have any questions or concerns, please feel free to contact me.
(Signature of health care provider)

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

- Secondary unvented units must conform to the safety standards of ANZI Z21.11.2 and must not have an input rating more than 40,000 Btu/hour. Replacement is not allowed, however the unit may be repaired, removed, or rendered inoperable. Deferral is required if this is not possible.
  - Must not be in, or obtain combustion air from sleeping rooms, bathrooms, toilet rooms, or storage closets except:
    - One listed wall-mounted space heater in a bathroom or bedroom if permitted by the authority having jurisdiction and:
      - Does not have an input rating exceeding 6,000 Btu/hour for bathroom and not exceeding 10,000 Btu/hour for bedroom.
      - Equipped with an oxygen-depletion sensing safety shut-off system.
      - Bathrooms or bedrooms have adequate combustion air.
- No unvented combustion appliances may remain, even as secondary units, in manufactured homes.

**Indicate Documentation Required for At-Risk Occupants**

To determine at risk, the client must show medical provider proof in the form of test results or letter describing respiratory ailments, allergies, pregnancy, or other conditions determined to put the client at risk by the medical provider.

**Testing Protocols**

Testing protocol is described in the NM Technical Standards pages 98-109.
Testing includes at minimum:

- Combustion gases (carbon monoxide, oxygen, etc.) under worse cases,
- Flue temperature,
- Temperature rise,
- Static pressure,
- Limit switch,
- Gas pressure test,
- Gas leaks,
- Flue condition,
- Combustion of air supply,
- Spillage under worse case,
- Efficiency,
- Blower speed where applicable,
- Room to room balancing,
- Other testing determined by a licensed HVAC professional.

All systems must be checked for operations and performance. This includes determining if the system can be installed as an ECM using the energy audit, inspecting the chimney/flue, and testing the CAZ for depressurization.
Solid fuel appliances must be inspected for visual evidence of soot on the surrounding areas.

**Client Education**

Clients are educated on the existing levels and dangers of CO, maintenance needs, basic operation, air blocking, disposal of bulk fuel tanks, how to recognize depressurization, and thermostat use. If the assessor determines a client is unable to use a thermostat, then it will not be installed. Clients must receive information in writing describing reasons for deferral if deferral is the only option. A copy of this must be kept in the client file.
When heat pumps are used as a health and safety heating fuel switch, and the clients are utilizing evaporative cooling, they must sign off on a form stating their understanding that the electric bills may increase if the heat pump is used in addition to or instead of an evaporative cooler. Clients must be informed that the heat pump does not feel the same as an evaporative cooler when used. Agencies will explain to the clients that windows are not to be left open when the heat pump is in use, and to keep the thermostat at a constant temperature.

**Training**

Energy Auditor, Crew Leader, QCI as comprehensive training and specified HVAC classes as needed. All HVAC installers must have a New Mexico MM 03 or MM 98 for multifamily license.
All agencies will be required to have field staff receive training on cold climate air source heat pumps and must achieve an EPA 608 certification for heat pump installation.

## 7.2 - Asbestos - All

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

Blower doors should be done with pressurization only. If friable asbestos is suspected, blower door testing will not be allowed. **All energy auditors must be able to identify friable asbestos.** Abatement is not allowed.

## 7.2a – Asbestos - in siding, walls, ceilings, etc.

**Concurrence, Alternative, or Deferral**

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|---|---|---|
| Concurrence with Guidance ☑ | Alternative Guidance ☐ | Results in Deferral ☐ |

**Funding**

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

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

If ACM (Asbestos Containing Material) is suspected within the walls, ceilings, flooring, roofing, or siding, the energy auditor must determine if the material is friable or non-friable and assess the likelihood of disturbance during any weatherization activity. When visual assessment is inconclusive, sampling and laboratory analysis conducted by a licensed asbestos professional may be required prior to proceeding.

Blower door testing will not be permitted if friable ACM is present and could become airborne. Agencies must evaluate whether pressure diagnostics may disturb ACM, including vermiculite insulation that may contain asbestos. If friable ACM is identified, the home must be deferred until proper abatement, or stabilization is completed by a licensed asbestos contractor.

If ACM will be disturbed during installation of a cost-effective measure, the cost of testing, containment, abatement, air monitoring, clearance testing, and proper disposal by a licensed asbestos professional must be included in the cost of the associated measure and factored into the SIR calculation. All abatement costs must be documented in the client file.

If the cumulative SIR for the dwelling falls below 1.0 after inclusion of asbestos-related costs, the home must be deferred in accordance with DOE Weatherization Program guidance.

It is recommended to drill from the interior side when feasible to avoid disturbing siding or exterior materials that may contain ACM. Where asbestos-containing siding is intact and in good condition (non-friable), it may be temporarily removed and reinstalled using safe work practices that prevent breakage. Damaged asbestos siding shall not be reinstalled.

Additional Compliance Language to Consider Adding

Agencies must comply with:
OSHA 29 CFR 1926.1101 (Construction Industry Asbestos Standard)
EPA NESHAP regulations (40 CFR Part 61)
State Environment Department Solid Waste and hazardous material disposal requirements
All applicable state and local asbestos licensing requirements
Proper notification to occupants must be provided if asbestos is identified or suspected.
Work crews must not disturb known or suspected ACM unless properly licensed, trained, and equipped.

**Testing Protocols**

Inspect exterior wall, ceiling and other surface and subsurface for asbestos prior to drilling or cutting. Agencies will assume asbestos is present *when suspected* and defer the unit unless testing proves otherwise. Testing is an allowable H&S expense and must be collected by a certified tester. Spells it out above

**Client Education**

Inform the client that suspected asbestos is present and what precautions will be needed, and what the test results show. This must be done in writing, and if tests are conducted, the client must be notified of results. If home is tested, then provide the test results from Lab or testing agency.

**Training and Certification Requirements**

Safe practices for siding removal and replacement are part of installer training. How to identify asbestos containing materials is part of energy auditor training. ACME and DC Environmental provides asbestos Inspector Training Course and is required for all energy auditors

## 7.2b – Asbestos - in vermiculite

**Concurrence, Alternative, or Deferral**

| | | |
|---|---|---|
| Concurrence with Guidance ☑ | Alternative Guidance ☐ | Results in Deferral ☐ |

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

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

When vermiculite is present, unless testing determines otherwise, take precautionary measures as if it contains asbestos, such as not using blower door tests and utilizing personal air monitoring while in attics. Proper respiratory protection must be used while in areas containing asbestos. Blower door testing of any kind will not be allowed when vermiculite is present. Encapsulation by an appropriately trained asbestos control professional is allowed. Removal is not allowed.

**Testing Protocols**

Assess whether vermiculite is present. Asbestos Hazard Emergency Response Act of 1986 (AHERA) certified prescriptive sampling is allowed by a certified tester.

**Client Education**

Clients should be instructed not to disturb suspected asbestos containing material. Asbestos safety information should be provided to the client. Formally notify client if test results are positive for asbestos and signed by the client. Client must receive in writing that conditions must be met prior to any weatherization activities.

**Training and Certification Requirements**

Auditors are required to have Energy Auditor training on how to recognize vermiculite and ACMs. AHERA or other appropriately trained/certified asbestos control professional are required for encapsulation training.

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

| Concurrence, Alternative, or Deferral | | |
|---|---|---|
| Concurrence with Guidance ☑ | Alternative Guidance ☐ | Results in Deferral ☐ |

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

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

Assume asbestos is present in covering materials. When friable asbestos is suspected, blower door testing will only be allowed after encapsulation by a trained professional. Removal may be allowed by an AHERA asbestos control professional on a case-by-case basis.
H&S costs directly associated with testing and encapsulation. Removal is not allowed.

**Testing Protocols**

After ACM is assessed for presence, AHERA testing, and collection is allowed by a certified tester.

**Client Education**

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| Clients should be instructed not to disturb suspected asbestos containing material. Asbestos safety information should be provided to the client. Formally notify client if test results are positive for asbestos and signed by the client. Clients must receive in writing that conditions must be met prior to any weatherization activities. |
| **Training and Certification Requirements** |
| AHERA course for testing and asbestos control professional training for abatement. This includes how to identify asbestos containing materials and what constitutes friable asbestos. |

## 7.5 – Biologicals and Unsanitary Conditions
(odors, mustiness, bacteria, viruses, raw sewage, rotting wood, etc.)

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|---|---|---|---|---|
| **Concurrence, Alternative, or Deferral** | | | | |
| Concurrence with Guidance ☑ | | Alternative Guidance ☐ | | Results in Deferral ☐ |
| | | Unallowable Measure ☐ | | |
| **Funding** | | | | |
| DOE ☑ | LIHEAP ☑ | State ☐ | Utility ☐ | Other ☑ |
| | | | | |
| **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, however, addressing bacteria and viruses is not an allowable cost. Agencies must contact MFA for the use of Weatherization Readiness Funds prior to issuing a deferral. If all options are exhausted, deferral may be necessary in cases where a known agent is present in the home that may create a serious risk to occupants or weatherization workers that cannot be mitigated. This is like Mold and Moisture guidance in section 7.16. | | | | |
| **Testing Protocols** | | | | |
| Sensory inspection, visual inspection, client feedback. | | | | |
| **Client Education** | | | | |
| Inform clients of observed conditions. Provide information on how to maintain a sanitary home and steps to correct deferral conditions. | | | | |
| **Training** | | | | |
| Agencies are trained as part of energy auditor and crew leader training in addition to field training on how to recognize conditions and when to defer. Worker safety when coming in contact these conditions is a huge priority. | | | | |

## 7.6 – Building Structure and Roofing

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|---|---|---|---|---|
| **Concurrence, Alternative, or Deferral** | | | | |
| Concurrence with Guidance ☑ | | Alternative Guidance ☐ | | Results in Deferral ☐ |
| | | | | |
| **Funding** | | | | |
| DOE ☑ | LIHEAP ☑ | State ☐ | Utility ☐ | Other ☑ |
| | | | | |

| What guidance do you provide Subgrantees for dealing with structural issues (e.g., roofing, wall, foundation) in homes slated for weatherization? |
|---|
| Agencies must utilize Weatherization Readiness and all funding sources available to remedy rehabilitation issues before deferring a unit. Funding sources such as CSLRF that can address many of these issues. Agencies are encouraged to defer as little as possible. DOE Health and Safety funds will not be used to fix structural issues beyond the thresholds outlined in this plan. |
| **How do you define "minor" or allowable structure and roofing repairs, and at what point are repairs considered beyond the scope of weatherization?** |
| **12 square feet** as is the maximum allowed for minor repair and the threshold for Weatherization Readiness or deferral for all homes except for flooring in mobile homes. The threshold for mobile home flooring is 32 square feet. Circumstances that warrant exceeding these thresholds will be considered on a case-by-case basis. An agency generated waiver to MFA will need to be first obtained with adequate justification. Repairs that are needed and can't be remedied using other funding sources, Weatherization Readiness, or eligible activities listed within this plan must result in the unit being deferred. |
| **If priority lists are used, and these repairs are designated as Incidental Repairs, at what point is a site-specific audit required?** |
| Site-built audits will be used at any point where there will be ECMs that the priority list does not cover. Site built audits may be run to determine the cumulative SIR of a building if it is reasonable for the assessor to believe the incidental repairs are extensive enough to warrant that action. |
| **Client Education** |
| The agency is to notify clients of structurally compromised areas. The proper steps for the client to take in order for weatherization work to occur plus how to prevent future deterioration is communicated to the client verbally and in writing. |
| **Training** |
| Code compliance, energy auditor, crew leader, and installer, specifically how to identify structural and roofing issues. Carpentry through Interplay is available to agencies for basic understanding of structural issues. |

| 7.7 – Code Compliance | | | | |
|---|---|---|---|---|
| **Concurrence, Alternative, or Deferral** | | | | |
| Concurrence with Guidance ☑ | | Alternative Guidance ☐ | | Results in Deferral ☐ |
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| **Funding** | | | | |
| DOE ☑ | LIHEAP ☑ | State ☑ | Utility ☑ | Other ☑ |
| | | | | |
| **What guidance do you provide Subgrantees for dealing with code compliance issues in homes receiving weatherization measures?** | | | | |
| Correction of pre-existing code compliance issues is not an allowable cost *other* than where weatherization measures are being conducted. State and local (or jurisdiction having authority) codes must be followed while installing weatherization measures. Condemned properties and properties where "red tagged" health and safety conditions exist that cannot be corrected under this guidance should be deferred if other funding sources or Weatherization Readiness cannot be used. | | | | |
| **What specific situations commonly trigger code compliance work requirements for your network? How are they addressed?** | | | | |

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|---|
| The most common code compliance triggers are electrical issues, electrical upgrade for mini-splits, water heater and heating system replacements. Code compliance determined by the state inspectors for each item must be adhered to when replacing any mechanical appliance. These issues are addressed by obtaining a proper permit, replacing the unit, or conducting the work to code, and requesting inspection after work is complete.<br>The specific code must be sited and written clearly in the client file. |
| **Client Education** |
| Inform clients of observed code compliance issues. If deferral is necessary, information must be provided in writing that describes the conditions that must be met for weatherization to begin. |
| **Training** |
| Code compliance for auditors. All field crew are trained as to when to contact the licensed contractor for that agency with code questions. |

| **7.8 – Combustion Gases** | | | | |
|---|---|---|---|---|
| **Concurrence, Alternative, or Deferral** | | | | |
| Concurrence with Guidance ☑ | | Alternative Guidance ☐ | | Results in Deferral ☐ |
| | | | | |
| **Funding** | | | | |
| DOE ☑ | LIHEAP ☑ | State ☐ | Utility ☐ | Other ☐ |
| | | | | |
| **Testing Protocols** | | | | |

- The following health and safety measures **must be performed on all combustion appliances** of weatherized homes. Staff must be training to simulate and recognize **worse case depressurization** when testing combustion equipment. These are performed at the **assessment level**, work **in progress end of day**, and **quality control final** inspection.
- Homes may not be left in an unsafe condition due to appliance failure of any kind.
    - Measurement of **ambient carbon monoxide** concentrations should be done. If any ambient level of CO **above 9 ppm** is found, the source must be identified, and the problem corrected.
        - The energy auditor should enter the dwelling with their CO measurement instrument running so that they can check the ambient CO concentration throughout the dwelling. An ambient air test for CO should be taken on coal, wood, unvented heaters and gas cook stoves.
    - A **CO test of undiluted flue gases** must be done on **all vented combustion appliances in worse case depressurization where applicable.** If a CO level **above 100 ppm** as measured is found in the undiluted flue gas sample, corrective action must be taken to reduce the CO to acceptable levels. If readings are detected above the minimum levels, no weatherization work is to be done until the problem is corrected.
    - **A gas leak detection test** must be taken on all natural and LP gas appliances and supply lines. All gas leaks must be repaired before any work is done.
    - **Spillage** on all vented natural gas, LP gas and oil appliances must be performed under **worst-case depressurization** conditions to ensure adequate venting.
    - An **inspection of the vent system** must be completed to ensure that the proper size and type of pipe is used, the condition of the vent pipe is satisfactory, the clearance meets applicable codes, and the vent system is unobstructed.
    - **Identify** the **combustion air source** and make sure it is unobstructed and sufficient, as defined by NFPA code.
- Replacement is an allowable H&S measure if unsafe conditions whose remediation is necessary to perform weatherization and the appliance run through the energy audit to determine if it can be justified as an ECM measure.
- Documentation justifying replacement with a cost comparison between replacement and repair must be maintained in the client file.
- A detailed description of these tests can be found in Section 7 and Section 3.10 of the NM Energy$mart Technical Standards.
- The local agency is responsible for any potential health and safety problems that will be compounded if prescribed conservation measures are installed. For example, if a furnace is emitting unacceptable levels of CO, it is likely that tightening the home would increase the problem. Therefore, this problem must be fixed before any air sealing is completed.

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

**Emergency Situations, Immediate Follow-up Required**
Some safety problems may warrant discontinuing the combustion appliance testing or shutting off the appliance until the repairs can be made. Whenever a technician questions the safety of a situation, they should consult a supervisor. The local natural gas or propane supplier should be called in whenever possible. Examples of this type of situation are:
1. Propane or natural gas leak: Propane can be smelled more than three feet from the leaking fitting or verified by gas tester.
2. Clogged or disconnected flue: A clogged or disconnected flue that cannot be fixed, causing significant spillage of combustion products into a heated space or working area of the technician.
3. Back drafting or significant spillage: Any back drafting of combustion products in combination with carbon monoxide indications, which cannot be fixed.
4. Cracked furnace heat exchanger: Any visually identified cracked heat exchanger leaking combustion byproducts.
5. Carbon monoxide levels in the heated space above 35 ppm in the ambient air.
6. CO detected within the heating appliance greater than 100ppm air free or 200ppm as measured for the oven.
7. Other hazards: Any other situation or combination of situations that the technician or supervisor judges hazardous to the health of the client or others.

**Non-Emergency, One-day Follow-up Recommended**
Some situations may not warrant discontinuing testing or shutting down the heating system but are serious enough to require attention within twenty-four hours. Examples of this type of situation are:
1. If carbon monoxide measured in the heated space exceeds 9 ppm.
2. There is inadequate draft or spillage.
3. A furnace with no limit switch, or a limit switch that is disconnected.

**Non-Emergency, Five-day Follow-up Recommended**
All other safety-related follow-ups must begin within five days. Examples of this type of situation are:
1. Draft or spillage in an unheated area that does not comply with the procedures in Section 12860.
2. A furnace limit switch that does not shut the gas off at 225oF.
3. A cracked heat exchanger is suspected, but there are no other apparent problems with the furnace.

**Client Education**

Clients are provided with combustion safety and hazards information, including the importance of using exhaust ventilation when cooking and the importance of keeping burners clean to limit the production of CO. Clients are informed of any high levels of other gases and fuel leaks.

**Training**

Agencies learn how to perform appropriate testing, determine when a building is excessively depressurized, and the difference between air free and as-measured CO action levels during the Energy Auditor training. This is also covered in HVAC, Crew Leader, Building Analyst and other trainings.

## 7.9 – Electrical

**Concurrence, Alternative, or Deferral**

| | | |
|---|---|---|
| Concurrence with Guidance ☑ | Alternative Guidance ☐ | Results in Deferral ☐ |

**Funding**

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

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

Minor upgrades and repairs necessary for weatherization measures where the health or safety of the occupant is at risk are allowed. Agencies must provide sufficient over-current protection and damming prior to insulating over knob-and-tube wiring. When repairs needed are over the threshold of **$3,500**, agencies must use Weatherization Readiness Funds or other funding before deferring the unit.

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

Minor threshold is determined by cost and cumulative SIR. If the resulting cost of the electrical work causes the home to no longer achieve the SIR of 1 the home will need to be deferred. If the cost of the work is greater than $3,500, prior approval must be obtained.

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

Site specific audit is required if the repairs can result in more ECMs being installed that are not part of the priority list.

**Client Education**

Provide information to clients on over-current protection, overloading circuits, basic electrical safety/risks.

**Training**

State code training for energy auditors and crew leaders covers identification of electrical hazards.

## 7.10 – Formaldehyde, Volatile Organic Compounds (VOCs), Flammable Liquids, and other Air Pollutants

**Concurrence, Alternative, or Deferral**

Concurrence with Guidance ☑ Alternative Guidance ☐ Results in Deferral ☐

**Funding**

DOE ☑ LIHEAP ☑ State ☐ Utility ☐ Other ☑

**What guidance do you provide Subgrantees for dealing with 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. It is preferred the client remove these items prior to weatherization work. If pollutants pose a risk to workers and removal cannot be performed by the client or agency, the unit must be deferred.

**Testing Protocols**

**Client Education**

Inform clients of observed conditions and associated risks. Provide client with written materials on safety and proper disposal of household pollutants. If deferral is warranted, the client must be provided in writing with the proper steps that must be met prior to weatherization.

**Training**

How to recognize potential hazards and when removal is necessary as part of field training. Healthy Homes training can help identify these hazards.

## 7.11 – Fuel Leaks

*(please indicate specific fuel type if policy differs by type)*

| Concurrence, Alternative, or Deferral | | | | |
|---|---|---|---|---|
| Concurrence with Guidance ☑ | | Alternative Guidance ☐ | | Results in Deferral ☐ |
| | | | | |
| **Funding** | | | | |
| DOE ☑ | LIHEAP ☑ | State ☐ | Utility ☐ | Other ☑ |
| | | | | |
| **Remediation Protocols** | | | | |
| All exposed lines are tested from utility gas meter or propane tank to, and throughout the home. When there is a suspected fuel leak, it is verified with spray solution for bubble inspection. When confirmed a leak is present, it is considered an emergency with immediate follow-up required.<br>1. Determine if location of leak falls on client side of meter or supplier side.<br>2. Call the appropriate party (gas company, propane company, licensed HVAC) to assess the situation.<br>3. When the leak is determined to be on the client side of the meter, the severity of the leak and repair is communicated to the agency and client. If the leak is on the supplier/ gas company side, the leak is repaired and retested. If the leak is on the client side, the severity and cost of the leak will determine if it is within the scope of the program. Weatherization will not continue until the leak is repaired. | | | | |
| **How do you define allowable fuel leak repairs, and at what point are repairs considered beyond the scope of weatherization?** | | | | |
| If the amount of repairs exceed the threshold limit of $1,500, the agency may request approval for the use of Weatherization Readiness Funds. Deferral must be issued to the client if the use of WRF or other funding sources is not able to remedy the situation. | | | | |
| **Client Education** | | | | |
| Clients are notified verbally and in writing of the leak location and advised not to use combustible appliances until the leak is corrected. If the line to the home will be closed until the leak is repaired, the clients are informed of the estimated repair timeframe.<br>Clients are advised that there will be more visits that same day from either the fuel supplier company or a licensed HVAC professional to remedy the situation. Clients are also advised if deferral is needed, and the next steps involved. | | | | |
| **Training** | | | | |
| Energy Auditor, Crew Leader, and HVAC for Energy Auditors. | | | | |

| 7.12 – Gas Ovens / Stovetops / Ranges | | | | |
|---|---|---|---|---|
| **Concurrence, Alternative, or Deferral** | | | | |
| Concurrence with Guidance ☑ | | Alternative Guidance ☐ | | Results in Deferral ☐ |
| | | | | |
| **Funding** | | | | |
| DOE ☑ | LIHEAP ☑ | State ☑ | Utility ☐ | Other ☑ |
| | | | | |
| **What guidance do you provide Subgrantees for addressing unsafe gas ovens/stoves/ranges in homes slated for weatherization?** | | | | |
| All gas ranges are to be tested and inspected for gas leaks, condition, carbon monoxide, and burner condition. When using DOE funds, replacement, tune and cleaning are allowed. The use of LIHEAP or State funds may also be allowed when the appliance is no more than 32” wide. | | | | |
| **Testing Protocols** | | | | |

1. Check for CO in ambient air upon arrival. If it is greater than 9 ppm, determine the source and correct the problem before proceeding.
2. Inspect the gas range installation for code compliance. Refer to the latest edition of the National Fuel Gas Code (NFPA 54), Household Cooking Appliances.
3. Check for gas leaks. If leaks are found, repair and document them before proceeding.
4. Check the flexible range connector for the date ring. If the connector does not have a date ring and/or is brass, replace the connector. The connector must connect outside of the cabinet and must pass through the wall of the range cabinet.
5. Inspect and test range top burners according to BPI Standards.
6. For the oven bake burner (do not test a separate broil burner):
   a. Remove cooking utensils from oven. Make sure foil or other materials do not obstruct the holes in the oven floor.
   b. Turn on burner to the maximum temperature, but not to "broil".
   c. Insert the probe into the oven vent far enough to get an undiluted exhaust gas sample.
   d. The CO emissions increase and then peak just after burner starts up; they then fall to a momentary plateau before the burner shuts down as part of the duty cycle. The reading CO ppm must be taken during this stable plateau. Record this "plateau" reading in the client file.
   e. If the reading at steady state exceeds 200 ppm as measured or 800 ppm air-free, then:
      I. Clean any rust and soot buildup on the spreader plate caused by flame impingement.
      II. Clean the burner if needed.
      III. Check for obstructed secondary air. If it is obstructed, remove the obstruction and educate the client how to keep from obstructing the burner.
      IV. Check the primary air adjustment and adjust if necessary or clear away any restrictions.
      V. Check to see that the burner is in alignment; it may require leveling the entire appliance.
      VI. Check the orifice size to ensure they are the right type and size in regard to LPG or natural gas. If the orifices need to be changed or adjusted, do so with the burner and the pilot orifices.
7. With a manometer (water column gauge), check that the gas pressure is correct. If the pressure regulator requires replacement, do so.

| **Client Education** |
|---|
| Clients are informed of any problems associated with the unit, including CO levels, gas leaks, condition and cleanliness of unit, use of ventilation fan when cooking, and the dangers of carbon monoxide. |
| **Training** |
| Energy Auditor, Building Analyst, Crew Leader. |

## 7.13 – Hazardous Materials Disposal [Lead, Refrigerant, Asbestos, Mercury (including CFLs/fluorescents), etc.]

*(please indicate material where policy differs by material)*

| **Concurrence, Alternative, or Deferral** | | |
|---|---|---|
| Concurrence with Guidance ☑ | Alternative Guidance ☐ | Results in Deferral ☐ |
| | | |
| **Funding** | | |
| DOE ☑ | LIHEAP ☑ | State ☐ | Utility ☐ | Other ☑ |
| | | |
| **Client Education** | | |
| Client must be informed in writing of hazards being handled in the home. | | |

| Training |
|---|
| OSHA 30, local disposal requirements, and any health risks associated with the use of these materials. |
| **Disposal Procedures and Documentation Requirements** |
| Hazardous materials that are a result of weatherization work or generated as result of weatherization work shall be disposed of according to all local laws and regulations. Documentation of these activities must be kept in the client file. The person who replaces the mercury containing bulb or thermostat is responsible for proper disposal. Bulbs can be disposed in recycling bins at most hardware stores that sell the items. Mercury containing thermostats are less common but are still in existence. These are placed in recycle bins located with the vendor that provides thermostats and similar items. |

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

| Concurrence, Alternative, or Deferral | | | | |
|---|---|---|---|---|
| Concurrence with Guidance ☑ | | Alternative Guidance ☐ | | Results in Deferral ☐ |
| | | | | |
| **Funding** | | | | |
| DOE ☑ | LIHEAP ☑ | State ☐ | Utility ☐ | Other ☑ |
| | | | | |
| **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 performing work on homes that will subject workers or occupants to health and safety risks. Minor repairs and installation may be conducted only when necessary to effectively weatherize the home; otherwise, these measures are not allowed.<br><br>If the installation of handrails or other environmental modifications are considered an emergency to the client, then CSLRF Funds may be used. | | | | |
| **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 is described as less than 12 square feet of work. | | | | |
| **Training** | | | | |
| OSHA 30 and other hazard identification training included in Energy Auditor or Installer and OSHA 10 for crew leaders and installers. | | | | |

## 7.15 – Lead Based Paint

| Concurrence, Alternative, or Deferral | | | | |
|---|---|---|---|---|
| Concurrence with Guidance ☑ | | Alternative Guidance ☐ | | Results in Deferral ☐ |
| | | | | |
| **Funding** | | | | |
| DOE ☑ | LIHEAP ☑ | State ☐ | Utility ☑ | Other ☐ |
| | | | | |
| **Safe Work Protocols** | | | | |

Each Service Provider must give notification to the occupants of homes to be weatherized regarding the potential hazards of lead paint and lead paint dust if the home was built prior to 1978. Lead-based surface coverings (paint, varnishes, roofing, etc.) can exist in other forms than just paint. EPA's publication "Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools" must be given to an adult occupant of the affected home. For occupied homes, the weatherization staff, crew, or contractors must have an adult tenant or homeowner sign an acknowledgement after receiving the pamphlet. The pamphlet can also be sent by certified mail with receipt to be placed in the customer file.

Crews must follow EPA's Lead RRP when working in pre-1978 housing unless testing confirms the work area to be lead free.

Lead-Safe Weatherization (LSW) includes weatherization worker protection, general LSW work practice standards, and lead dust containment standards. Please refer to the latest weatherization program standard for details.

Only costs directly associated with testing and lead safe practices are allowable H&S costs.

- Level 1 Containment. LESS THAN SIX (6) SQUARE FEET OF INTERIOR OR LESS THAN TWENTY (20) SQUARE FEET OF EXTERIOR WORK
  - Level 1 containment is required in pre-1978 homes when less than 6 square feet of interior painted surface per room or 20 square feet of exterior painted surface will be disturbed.
  - Level 1 consists of methods that prevent dust generation and contain all debris generated during the work process. The containment establishes the work area which must be kept secure.
- Level 2 Containment. MORE THAN OR EQUAL TO SIX (6) SQUARE FEET OR MORE THAN OR EQUAL TO TWENTY (20) SQUARE FEET OF EXTERIOR WORK
  - Level 2 containment is required when Weatherization activities will disturb equal to or more than 6 square feet of interior surface per room or equal to or more than 20 square feet of exterior surfaces in homes built prior to 1978. Level 2 containment consists of methods that define a work area that will not allow any dust or debris from work area to spread. Level 2 containment requires the covering of all horizontal surfaces, constructing barrier walls, sealing doorways, covering HVAC registers with approved materials, and closing windows to prevent the spread of dust and debris.
  - If an EPA certified lead test demonstrates there is no lead present, level 2 containment will not be required.
  - Measures requiring level 2 containment other than areas that are equal to or more than 6 squares of interior surface per room or equal to or more than 20 square feet of exterior surfaces may include:
    - Drilling holes in interior walls.
    - Drilling holes in exterior walls, removing painted siding.
    - Cutting attic access into ceiling or knee walls.
    - Planning a door in place.
    - Replacing door jambs and thresholds.
    - Replacing windows or doors.
    - Furnace replacements.
    - Additionally, Level 2 containment must ALWAYS be used where any of the following is conducted (even if the activities will disturb less than the hazard levels of 6 square feet of interior or 12 square feet of exterior surfaces within the Level 1 category):
      - Window replacement.
      - Demolition of painted surface areas.
      - 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 F. Note that the use of a drill, reciprocating saw, or other power tool is considered a "machine" for removing paint. As examples: Cutting an attic hatch inside the dwelling or interior drilling of holes for the installation of insulation require level two containment.
- There must be adequate documentation in the client file to demonstrate that lead safe weatherization measures were performed when necessary. Documentation should include photos of the site and containment set up, measures taken, and a list of materials used. The final inspector for each unit must also certify that LSW procedures were used and properly implemented.
- New Mexico Weatherization will adhere to EPA lead safe rules as written in the "Lead; Renovation, Repair, and Painting Program" Final Rule (LRRPP Final Rule), as directed by DOE.
- In cases where the subgrantee cannot safely weatherize a home due to lead paint hazards, the subgrantee may defer the work. Such deferral will be considered by the state on a case-by-case basis.

Service Providers may not weatherize dwellings where there are cases of documented or suspected lead poisoning. Additionally, they shall not weatherize homes where there is an extraordinary lead paint hazard and there are no means to abate the hazard, including insufficient funds or insufficient training to properly address the hazard.

| Testing Protocols |
|---|
| EPA approve testing kits must be used to determine presence or absence of lead, and the costs of test must be economically feasible. Job site cleaning is verified by the Certified Renovator. Lead safe work practices are verified during monitoring. If lead is present and the job is large enough for Weatherization Readiness Funds to be used, agencies must obtain a risk assessment for lead. |
| **Client Education** |
| Clients are given the Renovate Right pamphlet and are notified of the presence of lead and location. If deferral is necessary, clients must be notified in writing describing what steps must take place prior to weatherization. |
| **Training and Certification Requirements** |
| All employees and contractors working on these homes (pre-1978) must be Certified Renovators and receive training to install measures in a lead-safe manner according to SWS and EPA protocols. This training is the RRP Course offered through the Energy Smart Academy. |
| **Documentation Requirements** |
| Renovate Right must be signed and kept in each client file, certified renovator certification, lead testing information including photos of tests and site set up, location of lead presence, and notification of lead presence. |

## 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 ☐ |
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| **Funding** | | | | |
| DOE ☑ | LIHEAP ☑ | State ☐ | Utility ☐ | Other ☑ |
| | | | | |
| **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?** | | | | |

The Weatherization Assistance Program is not a mold remediation program. The use of DOE funds for the removal of mold and other related biological substances is not an allowable health and safety expense. If necessary, Weatherization Program services may need to be deferred until the existing mold problem can be corrected or referred to another agency for funding of remedial action.

All homes should be checked for previous or existing moisture problems.

- Visual assessment of exterior drainage and other moisture danger areas is required.
- A moisture assessment must be conducted with special attention to the following signs:
  - Evidence of condensation on windows and walls indicated by stains or mold.
  - Standing water, open sumps, open wells, dirt floors, water stains, etc. in basements or crawlspaces. Also, check to see if firewood is stored in the basement and whether laundry is hung to dry during the winter months.
  - Leaking supply or waste pipes.
  - Attic roof sheathing that shows signs of mold or mildew.
  - Active roof leaks.
  - Dryer fan and bath exhaust fan ducting that is nonexistent, damaged or constricted, too long, or not connected to outdoors.
  - Presence of unvented space heaters.
- During weatherization, measures that help reduce the humidity levels in the house may be installed. Examples of these measures are venting dryers to the outside, venting existing bath or kitchen exhaust fans or installing moisture barriers on dirt floors. Repair of moisture problems that might 1) result in health problems for the client, 2) damage the structure over the short- or long-term, or 3) diminish the effectiveness of the weatherization measures, must be done before the weatherization job is completed.

- Moisture problems can be reduced or eliminated by ventilating areas where excessive moisture is produced, such as bathrooms and kitchens. This should include installation of a high quality properly sized exhaust fan in the subject area and informing the client of the related moisture issues and the proper operation and use of the fan. Other methods include:
  - Venting dryers to the outside of the dwelling.
  - Exhaust ventilation
  - Sealing the foundation.
  - Providing positive drainage away from the foundation.
  - Repairing the roof, flashing, gutter, and downspouts.
  - Educating the client about the sources of moisture that they can control.
  - Removal of unvented space heaters.

- If an existing moisture, mold or mildew problem is found, the agency must determine if the moisture problem can be fixed under the scope of weatherization or if there should be a deferral of service because of the severity of the problem (typically 10 square feet or more of affected surface).
  - If it is determined that the problems are too severe under the scope of weatherization, a Deferral of Service form shall be signed at the time of inspection and left with the client and a copy placed in the client file.
  - Client education must be given to the client to inform them of the health and safety problems associated with mold or mildew and the possible self-help solutions they can perform at a later date.
  - The agency should try to refer the client to other programs or agencies that may be able to assist in resolution of the problem.

- If surface preparation includes measures such as cleaning mold from windows prior to apply caulking or other similar items, it must be charged to the corresponding ECM, and not health and safety.
- Testing is not an allowable cost; agencies are encouraged to use moisture meters, but it is not required.
- Weatherization Readiness Funds may be used to prevent deferral.

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

12 Square feet or more will trigger deferral.

**Client Education**

All clients are provided with written documentation on the presence of mold, moisture, and if deferral is necessary. Clients are provided with information on proper moisture control such as repairing roof leaks, drainage, and water flow towards the property. If deferral is necessary, clients must be notified in writing describing what steps must take place prior to weatherization.

**Training**

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| How to recognize drainage, moisture, or mold issues is included with Energy Auditor and Building Analyst Technician (BAT). |

| 7.17 – Pests | | | | |
|---|---|---|---|---|
| **Concurrence, Alternative, or Deferral** | | | | |
| Concurrence with Guidance ☑ | | Alternative Guidance ☐ | | Results in Deferral ☐ |
| | | | | |
| **Funding** | | | | |
| DOE ☑ | LIHEAP ☑ | State ☐ | Utility ☐ | Other ☐ |
| | | | | |
| **What guidance do you provide Subgrantees for dealing with 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 health and safety concern for workers. Screening of windows and points of access is allowed to prevent intrusion. | | | | |
| **Define Pest Infestation Thresholds, Beyond Which Weatherization Is Deferred** | | | | |
| | | | | |
| **Testing Protocols** | | | | |
| Assessment of presence and degree of infestation and risk to worker | | | | |
| **Client Education** | | | | |
| Inform clients of observed condition, associated risks, and deferral policy. | | | | |
| **Training** | | | | |
| How to assess presence and degree of infestation, associated risks, and need for deferral. | | | | |

| 7.18 – Radon | | | | |
|---|---|---|---|---|
| **Concurrence, Alternative, or Deferral** | | | | |
| Concurrence with Guidance ☑ | | Alternative Guidance ☐ | | Results in Deferral ☐ |
| | | | | |
| **Funding** | | | | |
| DOE ☑ | LIHEAP ☑ | State ☐ | Utility ☐ | Other ☑ |
| | | | | |
| **What guidance do you provide Subgrantees around radon?** | | | | |

- Provide the client with EPA's consumer guide to radon.
- PER SWS requirements, crawlspaces with exposed dirt must be covered with a 6-mil vapor permeable ground cover. In dwellings where radon may be present, precautions should be taken to reduce the likeliness of making radon concentrations higher.
- Based on the BEX report, every home is required to receive the following package of measures if applicable, regardless of radon zone where located:
  - 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
- Provide an updated sample template for the occupant's informed consent which includes the required information and updated references.
- Radon mitigation is not allowed by DOE.

**Testing Protocols**

Testing is allowed in locations with high radon potential but is not recommended or practiced. These include Rio Arriba, Taos, Colfax, Mora, San Miguel, Santa Fe and Bernalillo Counties.

**Client Education**

Clients are provided with A Citizens Guide to Radon and informed of the risks. They must sign an informed consent form prior to receiving weatherization services. Informed consent form is required to be kept in the client file. This form must include:

The results of the IAQ Study and the small risk of increasing radon levels when tightness is improved, list of precautionary measures that WAP installs, and the benefits of weatherization such as energy savings, improved home comfort, and increased safety.

**Training and Certification Requirements**

Training is provided to assessors and crew as to what radon is, and how it occurs. What factors may make radon worse are observed. Staff are trained in what weatherization measures may be helpful such as vapor barrier installation and mechanical ventilation. Weatherization staff are expected to be familiar with the zonal map located http://www.epa.gov/radon/pdfs/zonemapcolor.pdf .

**Documentation Requirements**

Citizen's Guide to Radon documentation that client has signed is kept in the client file, along with the informed consent form.

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

**Concurrence, Alternative, or Deferral**

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|---|---|---|
| Concurrence with Guidance ☑ | Alternative Guidance ☐ | Results in Deferral ☐ |

**Funding**

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

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

Smoke Alarms: Installation of smoke/CO detectors is allowed where detectors are not present or are inoperable. Installation of CO alarms is required in every home regardless of location or fuel sources. Replacement of functional smoke and CO alarms is allowed that are past the manufacturer's stated lifetime (usually 10 years), or the batteries of those that are operational but need replacement batteries.

All installations must follow manufacturer directions and SWS requirements.

- All smoke alarms must be in compliance with NFPA 72.
- All smoke alarms must be in accordance with UL 217.

Carbon Monoxide Alarms: Installation of smoke/CO detectors is allowed where detectors are not present, hard wired, or are inoperable. Replacement of operable smoke/CO detectors is not an allowable cost. All installations must follow manufacturer directions and SWS requirements.

- Where operable units are not present at least one CO alarm must be installed outside of each sleeping area. and follow the manufacturer's recommendations for locating and installing the alarm. Typically, alarms are installed where the clients spend most time, such as near bedrooms. If an entire multifamily building is to receive weatherization services, a CO alarm should be installed in each unit of the complex.
  - Combustion appliances are defined as any piece of equipment (such as a water heater, cook stove, or heating system) that burns fuel such as wood, kerosene, oil, natural gas, or propane.
  - Unvented space heaters are expressly prohibited in weatherized homes unless they are compliant with ANSIZ21.11.2 with an alarm system indicating high CO levels.

- All installed CO alarms must:
  - In compliance with NFPA 720.
  - Be UL 2034 listed.
  - Have an electrochemical sensor with a 5-year warranty.
  - Be a plug-in type with a battery backup or battery-operated units with a 5-year warranty.
  - Have a sensor life monitor that alarms after 5 years or at the expiration of the useful sensor life.
  - Have a digital LCD display.
  - Sample ambient air at least every 2 minutes.
  - Have an alarm of 85 decibels at 10 feet.
  - Be capable of displaying: the current CO level detected from 35ppm to 500 ppm CO, the peak level detected, the total time peak level was recorded.

- Customer education is a vital part of protecting households from the dangers of CO. Ensure that client education regarding the potential hazards of combustion appliances is delivered.

- The cost of the CO alarm or combination CO and smoke alarm is health and safety material and labor cost.

- Upon final inspection, the client will be interviewed and questioned on the usage of the alarm. Review by the final inspector will be necessary for clients that were not present during the initial installation or clients with unclear ideas of how the unit works.

  - The unit cannot be reported as complete if there are no residents that understand how the unit works and what to do in the event it was to sound an alarm.

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| Fire Extinguishers: Providing fire extinguishers is allowed only when solid fuel is present. |
| **Testing Protocols** |
| Operation checks on all existing alarms. |
| **Client Education** |
| Provide clients with verbal and written information on use of smoke/CO detectors and fire extinguishers where allowed. Clients must receive adequate education on operation of alarm during final inspection in addition to assessment and work in progress. |
| **Training** |
| Where to install detectors. Local code compliance. Code for Energy Auditors class. |

## 7.20 – Occupant Health and Safety Concerns and Conditions

**Concurrence, Alternative, or Deferral**

Concurrence with Guidance ☑ Alternative Guidance ☐ Results in Deferral ☑

**Funding**

DOE ☑ LIHEAP ☑ State ☐ Utility ☐ Other ☑

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

**General**

When a person's health may be at risk and/or the work activities could constitute a health or safety hazard, the occupant at risk will be required to take appropriate action based on severity of risk. Temporary relocation of at-risk occupants may be allowed on a case-by-case basis. Failure or the inability to take appropriate action must result in deferral.

**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?**

**General**

- All client applications must include a field for clients to include suspected health and safety concerns.
- Health and safety issues should be addressed as part of the client education process, both verbally and by distributing educational pamphlets during the audit "walk-through." This can be particularly effective as the auditor notices and discusses potential hazards.
- All Health and Safety Forms signed by the client must include a check box acknowledging that the weatherization work that will be performed will not worsen suspected health and safety concerns.
- Screening of occupant health conditions must be documented using the "Occupant Pre-existing or Potential Health Condition Screening Form" required by WPN 22-7.

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

**General**

- Weatherization services must be provided in a manner that minimizes risk to clients.
- Dwellings with unvented (vent-free) combustion appliances used as a primary heat source, may not be weatherized until such appliances are properly vented outdoors (according to the appropriate code) or removed. Refer to Section 8430 and DOE Guidance 17-7 for more information.
- Building owners and clients must be notified of any health or safety problems that require deferring the weatherization work. Documentation of this notification must be included in the client file.
- It is preferred that Subgrantees minimize or restrict the use of materials that may be hazardous to the client.
- Special precautions must be taken if the occupant of the home has respiratory ailments, allergies, is pregnant, or has unique health concerns.
- Subgrantees should try to protect all clients from respirable particles, such as paint or insulation dust, during the weatherization process.
- NM does not use two-part foam. If it is used, it must be done in well-ventilated areas.
- Weatherization personnel shall not smoke cigarettes, cigars, or pipes in a client's home or outdoors within 25 feet of the client's home.
- If strong smelling chemicals, such as formaldehyde, are detected in the client's home, service provider should not perform any weatherization measures that would reduce the natural air leakage of the dwelling until the hazards are remedy.
- At a minimum, auditors and weatherization personnel should inform property owners of safety problems, code problems, and other health and safety issues. These items might include:

    - Hazardous levels of carbon monoxide.
    - Raw sewage leaks from waste plumbing pipes.
    - Mold and moisture.
    - Friable asbestos.
    - Radon gas.
    - Lead safe weatherization requirements.

| **Client Education** |
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| Provide client information of any known risks. Client must be informed in writing of known risks to the client due to pre-existing health conditions. Clients must also be provided with contact information in writing. If deferral is necessary, clients must be notified in writing describing what steps must take place prior to weatherization. |
| Documentation Form(s) have been developed and comply with guidance? Yes ☑ No ☐ |
| |

## 7.21 – Ventilation and Indoor Air Quality

| **Concurrence, Alternative, or Deferral** | | |
|---|---|---|
| Concurrence with Guidance ☑ | Alternative Guidance ☐ | Results in Deferral ☐ |
| | | |

| **Funding** | | | | |
|---|---|---|---|---|
| DOE ☑ | LIHEAP ☑ | State ☐ | Utility ☐ | Other ☐ |

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| **Identify the Most Recent Version of ASHRAE 62.2 Implemented (optional: identify Addenda used)** |
| All units must comply with ASHRAE 62.2 2016. Prior to beginning work and during the initial assessment, clients will first receive proper education as to why it is important for the home to have adequate ventilation. If after being given ample opportunity to receive the services, the client refuses mechanical ventilation, and there are no other solutions that comply with ASHRAE 62.2 2016, then the deferral process will begin. Protocols have been incorporated into the following areas of our training agenda:<br>○ Energy audit process<br>○ Air quality assessment<br>○ ASHRAE 62.2<br><br>Ventilation and Acceptable Indoor Air Quality shall be used for the installation of ventilation systems, both local ventilation and whole-building ventilation. Agencies are encouraged to arrange the installation of the ventilation fan before other work begins. This is to prevent the client from refusing the fan after other work is done, resulting in a unit that cannot be reported to DOE, and depending on the available funding sources and per unit average, ineligible for reimbursement.<br><br>Actions to prevent zonal pressure differences greater than 3 pascals across a closed door if one exists are required. |
| **Testing and Final Verification Protocols** |
| ASHRAE 62.2 -2016 evaluation, fan flow, installed equipment and follow up testing are required to ensure compliance. |
| **Client Education** |
| Provide clients with information on function, use, cleaning, and maintenance of ventilation system and components. This includes the location of the service switch. Disclaimers that ASHRAE 62.2 does not account for high polluting sources or guarantee indoor air quality should be included. Clients must receive equipment manuals. |
| **Training** |
| |
| ASHRAE 62.2 -2016 training required including proper sizing, evaluation of existing and new systems, depressurization tightness limits, critical air zones, etc. Energy Auditor, Crew Leader, QCI |

| **7.22 – Window and Door Replacement, Window Guards** | | | | |
|---|---|---|---|---|
| **Concurrence, Alternative, or Deferral** | | | | |
| Concurrence with Guidance ☑ | Alternative Guidance ☐ | Results in Deferral ☐ | | |
| | | | | |
| **Funding** | | | | |
| DOE ☐ | LIHEAP ☐ | State ☐ | Utility ☐ | Other ☑ |
| No funding is used as health and safety for these items. | | | | |
| **What guidance do you provide to Subgrantees regarding window and door replacement and window guards?** | | | | |

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| Replacement, repair, or installation of windows and doors is not an allowable health and safety cost, but door replacement may be allowed as an incidental repair or an efficiency measure if cost justified.<br>If windows and doors present health and safety concern, agencies must look to other funding sources to take care of the problem. |
| **Testing Protocols** |
| NA |
| **Client Education** |
| Lead Based Paint Risks |
| **Training** |
| Guidance Awareness |

## 7.23 – Worker Safety (OSHA, etc.)

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| **Concurrence, Alternative, or Deferral** | | | | |
| Concurrence with Guidance ☑ | | Alternative Guidance ☐ | | Results in Deferral ☐ |
| | | | | |
| **Funding** | | | | |
| DOE ☑ | LIHEAP ☑ | State ☐ | Utility ☐ | Other ☐ |
| | | | | |
| **How do you verify safe work practices? What is your policy for in-progress monitoring?** | | | | |
| Jobsites are visited during technical monitoring, and crews are observed using PPE and following OSHA standards such as safe ladder use. SDS sheets are inspected for updates and location during the technical field monitoring.<br><u>OSHA's Hazzard Communication Standard</u><br>NM agencies have been compliant with OSHA's Hazzard Communication Standard utilizing Safety Data Sheets that have replaced the MSDS since PY 2015. Each vehicle is equipped with SDS sheets for the commonly used chemicals.<br><u>OSHA's Confined Space Requirement</u><br>The assessor must test for oxygen, carbon monoxide, hydrogen sulfide, and combustible gases prior to entry and decide if the space is a permit required space based off OSHA guidance 1910.146. Agencies are required to keep documents in each client file that describes if confined spaces such as attics and crawl spaces require a safety permit and designated competent person during entry of a confined space. | | | | |
| **Training and Certification Requirements** | | | | |
| OSHA 10, OSHA 30, and use of PPE | | | | |

## 7.24 – <Add in Topic>

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| **Concurrence, Alternative, or Deferral** | | | | |
| Concurrence with Guidance ☐ | | Alternative Guidance ☐ | | Results in Deferral ☐ |
| | | | | |
| **Funding** | | | | |
| DOE ☐ | LIHEAP ☐ | State ☐ | Utility ☐ | Other ☐ |
| | | | | |
| **Remediation Protocols** | | | | |
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| **Testing Protocols** | | | | |

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| ASHRAE 62.2 -2016 evaluation, fan flow, and follow up testing are required to ensure compliance. |
| **Client Education** |
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| **Training** |
| |

| **7.24 – <Add in Topic>** | | | | |
|---|---|---|---|---|
| **Concurrence, Alternative, or Deferral** | | | | |
| Concurrence with Guidance ☐ | | Alternative Guidance ☐ | | Results in Deferral ☐ |
| | | | | |
| **Funding** | | | | |
| DOE ☐ | LIHEAP ☐ | State ☐ | Utility ☐ | Other ☐ |
| | | | | |
| **Remediation Protocols** | | | | |
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| **Testing Protocols** | | | | |
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| **Client Education** | | | | |
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| **Training** | | | | |
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