

Texas Department of Housing and Community Affairs

Weatherization Program

Health & Safety Q&As

(Updated October 2024)

The Texas Department of Housing and Community Affairs (The Department) has created the following document to assist its Weatherization funded Subrecipients to answer applicable program questions. The document contains answers to the questions the Department has received that are relevant to the network. In addition to this document, Subrecipients are encouraged to take the following steps to respond to their questions:

- Review your applicable DOE and LIHEAP WAP Contracts
- Reference applicable TAC Rules
- Reference other applicable program rules/guidelines (CFRs, TXGMS, WPNs, WAP Memos, etc.)
- Review WAP guidance provided on the TDHCA Website

If after reading and referencing these materials, you still have questions, please contact the training by submitting a program question by completing this form:

- <https://tdhca.wufoo.com/forms/request-for-ca-program-assistance/>

You may click on the hyperlinks below to move to the most appropriate category that applies to your question.

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Department Q&As available:

- For information regarding income guidelines, please refer to the Department's [Income Guidelines Q&A](#).
- For information regarding Health & Safety topics (CAZ, ASHRAE, LSW, K&T, etc.), please refer to the Department's [H&S Q&A](#).
- For information regarding General WAP topics (T&TA, Bonding, etc.), please refer to the Department's [General Q&A](#).
- For information regarding WAP documentation (client files, Assessments, Final Inspections, Multifamily), please refer to the Department's [Documentation Q&A](#).
- For information regarding energy audit processes, please refer to the Department's [Energy Audit Q&A](#).
- For information regarding WAP Work topics (Priority List, Major/Mandatory/Secondary/Optional measures, etc.), please refer to the Department's [WAP Work Scope Q&A](#).

Best Practice(s) available upon request:

- Client Denials & Referrals
- WAP Client File Checklist
- Whole House Assessment
- Isolating the CAZ
- Mobile Home Work Scope
- Principles of CFM Reduction
- Window & Door Replacement
- Using ASHRAE 62.2-2016 Calculator
- Evaporative Coolers
- Unit Replacement
- Manual J/S
- SEER, EER, HSPF, and AFUE Degradation
- Water Heater
- Final Inspection Process
- Multifamily Weatherization

HEALTH & SAFETY (H&S)

General

1. What is the Department's guidance for the potential H&S issues?

Detailed guidance can be located on the Department website under the H&S Subsection. Please pay special attention to the current *PY WAP Health & Safety Plan* and *DOE H&S WPN* links found within the *Guidance & Resources* subsection.

- [TDHCA Website \(Program Guidance\)](#)

2. Can Subrecipients develop and use a company policy to defer a house based on a percentage of the H&S cost? And how much are we authorized to expend on H&S costs at a particular home?

Internal development of such policy is at the discretion of each Subrecipient. Please keep in mind the following:

- The H&S limit applies agency-wide rather than to individual homes, and H&S costs do not count toward the cost per unit (CPU) or affect the SIR factor in the energy audit. It is the Subrecipient's responsibility to ensure that the H&S ratio is met by the end of the contract term. To avoid disallowed costs, consider the following scenarios to meet this requirement.
- [TAC 6.415\(a\)](#) provides guidance of how to calculate the allowable H&S percentage.
- H&S expenditure caps are based off the aggregate H&S cost of all units served within each contract and not the individual unit H&S cost.
- If a policy is developed, Subrecipients should be consistent in implementing and following through on that policy to ensure each unit is served in the same manner.
 - Scenario 1: Policy Implementation by Subrecipient
 - A Sub determines that H&S costs for a particular unit are projected to exceed 20% of the total project costs.

- Based on adopted policy, work should be deferred because the cost exceeds the allowable threshold, ensuring consistently across all projects.
 - Scenario 2: Aggregate Costs Management
 - Throughout the contract period, a Subrecipient tracks aggregate H&S spending.
 - As a Subrecipient approaches the H&S expenditure cap, they defer units that would cause them to exceed this limit, ensuring compliance within TAC 6.415.
 - Note: Budget Amendments may be requested (45) days prior to the end of the contract date to increase H&S funds, if applicable.

3. Is the H&S Requirements Form required and what is the purpose?

Yes, DOE requires certain documentation address pre-existing or potential health conditions. The purpose of the H&S Requirements form is combined and streamline the collection of information for any potential H&S concerns related to different components of their homes (unified elements, mold-like substance, radon). Obtained information must be taken into consideration when determining the units work scope to ensure occupant safety.

4. Can I spend H&S money on a home where No Energy Conservation Measures are available to install?

Yes, however, this home will not receive credit or categorized as a reportable weatherized unit. To receive credit, an approved energy audit or priority list has been applied to the dwelling unit, and weatherization work has been completed.

5. What does “case-by-case” mean within the current Health & Safety (H&S) plan mean?

“Case-by-case” indicates that the H&S plan does not refer to a comprehensive policy related to the specific item but must instead provide specific guidance for the decision-making process that will require additional review from the Department to ensure cost-effective guidelines are considered.

6. How do I determine if a measure is a H&S item or an Incidental Repair Measure (IRM)?

First, refer to WPN 19-5 for definition of an IRM as it relates to the WAP program. Then use the definition flow chart of the proposed measure to assist whether the proposed measure should be treated as an IRM that is either typical ECM installation or to preserve the performance of the ECM or should be installed as a H&S measure.

Example questions to consider:

- Is the measure necessary to perform weatherization, or needed to protect the occupant because of weatherization activities?
- Is the measure specific to ensuring the H&S of the occupant/worker?
- Is the activity a component of an efficiency measure (as with a flue liner when combustion equipment is replaced as an ECM) and therefore not H&S?
- What parts of a measure would have been conducted anyway, without consideration for the H&S guidance?
- Could there be circumstances where the item could qualify as an IRM or H&S measure?
 - Note: Justification for the cost of each IRM and why it is necessary for the effective performance or preservation of an ECM must be documented in the client file with photos and written explanation.

7. What if a H&S Measure can be cost-justified as an efficiency measure?

When a measure could potentially be an ECM, always attempt to cost-justify it using your energy audit procedures before considering it as an H&S expense. Some measures, such as furnaces, air conditioning, or water heaters, may qualify as either H&S or ECM. If the measure has an SIR of 1.0 or greater, it must be treated as an ECM. If the SIR is below 1.0, the measure can be considered as an H&S measure instead.

8. Does TDCHA have a deferral policy listed in the H&S plan?

Yes and no, within our H&S plan, we make three distinctions about how/when/if a deferral is applicable by outlining the allowable actions, prohibited actions, the required/allowable testing/inspection procedures, along with the required occupant education materials. During the assessment if any identified areas fall within the “Prohibited actions” would trigger a deferral automatically. Subgrantees should be aware of the current adopted H&S plan at all times & should apply it consistently when faced with the difficult decision to defer, referral, and client notification procedures.

9. What constitutes an “unsafe” secondary unit?

Section 6.1 of the current H&S plan will define what is considered unsafe, secondary units that are unsafe cannot be replaced or repaired with DOE H&S funds, an alternative funding source must be used in this scenario, if the alternative funding source is not available to remove or replace and dispose of the unsafe secondary unit then a deferral is required. See Combustion Appliance Zone question 1 for more details.

10. Are we required to install poly over all exposed dirt floors?

Yes, in cases where floor insulation is being called for either by the approved energy audit or PL, then all spaces that are inside the thermal/pressure boundary, which will typically be the crawlspace in Texas that are not sealed out of the pressure boundary per [SWS 2.0202](#).

11. What is meant by “radon mitigation” and is it an allowable expense for H&S.

To put it simply, Radon mitigation is a system designed to lower radon gas levels in the air inside buildings or from water sources. To reduce radon in the air, systems either pull the gas from under the concrete floor or ground covering, or they improve ventilation to move the air out of the building more often. Using H&S funds is strictly prohibited to mitigate any radon issues associated with the home nor is testing authorized as Texas has no areas of “Highest Potentials” according to EPA standards.

Combustion Appliance Zone (CAZ)/Combustion Appliances

1. When there are multiple UVSHs, it could potentially exhaust our H&S funds to replace them all. Are these homes a walk-away or how do you suggest Subrecipients handle this? In addition, can Subrecipients use DOE or LIHEAP H&S funds to do this?

This question potentially applies to multiple scenarios. Please refer to the current approved H&S Plan guidance and consider the following:

- Options to avoid exhausting all H&S funds:
 - Option A – combine the BTU’s of all heaters (in bedroom/living room, etc.) and consider a well-placed, code-compliant, vented heating unit located where it could provide heat for multiple living areas in the home.
 - Option B – work with the local CEAP provider in the area & determine if a solution to address the heating issue could be allowed per current program guidelines.
 - Option C – if H&S funding shortages occur, defer units and utilize WRF funding to install DOE complaint heat source within the home (*no UVSHs*).
 - Option D – explore other funding sources to aid in addressing H&S expenditures to allow the Subrecipient to continue to operate within the program H&S expenditure caps.
- DOE vs. LIHEAP guidelines for addressing UVSHs
 - DOE WAP – UVSHs serving as the primary heat source are required to be replaced with a vented primary heat source. DOE funding **cannot** be utilized to address non-compliant Secondary UVSH’s; UVSHs that are not compliant with current standards will need to be removed or replaced with alternative funds.

- LIHEAP WAP – UVSHs serving as the primary heat source are required to be replaced with a vented primary heat source. LIHEAP funding **can** be utilized to address non-compliant secondary UVSHs, however the replacement units must adhere to sizing restrictions and be code compliant.
- 2. What if a Subrecipient clean/tune the stove and it does not correct the H&S problem; are Subrecipients to pay the contractor for cleaning? How is this billed?**

If the Subrecipient has a contractor go out and clean the stove, but the cleaning does not remedy the H&S problem, these charges associated with the clean/tune would still be an allowable program support charge.

Reminders:

- Limited cleaning, tuning, and repairs are allowed by both DOE and LIHEAP:
 - DOE cost shall not be exceed the amount listed within the Health & Safety Plan
 - Limited replacement of unsafe gas ovens/ranges/stovetops are allowed by both DOE and LIHEAP
 - Only allowed when cleaning, tuning, or repair did not resolve the identified hazard
 - Documentation of efforts to clean, tune, or repair must be retained in the client file.
- 3. What is the guidance about testing combustion appliances outside the envelope?**

Generally speaking, all combustion appliances require all applicable combustion **and** combustion appliance zone (CAZ) tests to be conducted. Potential CAZ testing exceptions are for looped two (2) piped high efficiency gas appliances that have exhaust/intake piping (commonly PVC) terminated to the exterior of a structure or combustion appliance that have no possible connection with the building pressure boundary. When in doubt, run all applicable tests on all combustion appliances; it is the safest option for the client.

ASHRAE

- 1. Is ASHRAE compliance required for all weatherization projects?**

Yes, per the current H&S guidance, compliance with ASHRAE 62.2 2016 standards is required for all weatherization projects.

- 2. If a client refuses the ASHRAE ventilation to be installed, is this home a denial?**

Most likely a deferral, yes. The current H&S guidance requires compliance with the ASHRAE 62.2 2016 standard at the conclusion of the WAP work, so the answer would be dependent on the potential need for additional ventilation in the unit. If the unit needs added ventilation to meet the current required ASHRAE standard, and the client refuses, then the house would not comply with Health & Safety requirements and must be denied services.

- 3. Do you have any client education materials about air quality?**

Below are several links to air quality resources that could be utilized for client education purposes:

- [EPA Publications](#)
- [ENERGY.GOV Publication](#)

- 4. Is it required to install CO alarms in every home per ASHRAE?**

Yes, every weatherized home must have a functioning CO alarms according to NFPA 720. If they are already present in all required in all required locations and functioning properly, you may not need to install new ones. The reference to NFPA 720 is only for determining where and how to install these alarms. NFPA has been replaced by NFPA 72, which mimics the same installation locations as NFPA 720.

5. May I leave existing local ventilation fans in place?

Yes, you may leave existing bathroom and kitchen fans in place. They must be used to meet local ventilation rates, but they must also be ducted to the outside. They must also be used to meet dwelling-unit ventilation requirements if they are properly ducted to the outside, have adequate airflow, and have appropriate controls.

ASHRAE Calculations

1. Is there a calculator available to assist with documenting ASHRAE compliance?

Yes, Subrecipients can utilize the RED Calc Free [ASHRAE 62.2-2016 Ventilation Calculator](#) here.

2. For number of occupants, do Subrecipients count the number of people on the application or the number of people actually staying there?

The number to use is either: (a) “number of bedrooms + 1” or (b) the number of people living in the space at the time of assessment, whichever number is larger.

3. Can you clarify the dwell height input?

For the dwelling height input, you would utilize the vertical distance between the lowest and highest above-grade points within the dwelling pressure boundary.

Example:

- 1200 sq. ft. single story house
 - 600 sq. ft. is under a vaulted ceiling
 - 16’ –distance between the lowest and highest above-grade points within the pressure boundary
 - 600 sq. ft. has flat ceilings
 - 8’ –distance between the lowest and highest above-grade points within the pressure boundary
- Correct height to utilize for the unit described below is 16’ as volume does not come into play within the ASHRAE calculation

4. Can the Department provide information on how the blower door target affects the required ventilation determined by the ASHRAE calculator?

Generally speaking, the higher the blower door target, the less mechanical ventilation needed. Subrecipients should not avoid air-sealing targets or limit air infiltration efforts to avoid installing an ASHRAE fan. Keep in mind the primary focus should be air seal tight, and if necessary, ventilate right! Remember effective air sealing along with ASHRAE standard compliance are both requirements for all weatherized units. Both works together to improve indoor air quality.

5. Sometimes we end up installing ventilation based on our BD target but upon completion of work, our target is not achieved. The ASHRAE measures are already installed due to addressing H&S first and there are no additional funds available to do more air sealing. Will this trigger a compliance problem?

If this is happening on a regular basis, the Department suggests the Subrecipient review their air sealing process to determine the causes for not meeting the air infiltration targets & implement improvements. Rare instances of not obtaining targets can be expected as sometimes the house just wins. To avoid potential issues with ASHRAE measures being installed in a home where it was not needed the Subrecipient could:

- Maximize air sealing expenditures and address air infiltration prior to installing the fan to eliminate the guesswork from knowing if the ASHRAE measures were required.
- Install the ASHRAE fan in a centralized bathroom so the fan could be utilized to remove moisture & pollutants from within the unit to improve indoor air quality on an as needed basis, but available for ASHRAE compliance should the need be determined.

- **Note:** Additional benefit of locating the fan within a bathroom from the ASHRAE standpoint could be the dual credit option. Please contact CA training staff if you need specific guidance related to the dual credit option.
6. **Are Subrecipients required to enter the information for a fan or vent hood that is just recirculating air into the calculator anyway?**
No, those fans/vent hoods are not exhausting the air out of the house, so the exhaust rates for those fans/vent hoods would not be included in the ASHRAE calculation.
 7. **Do I need to install dwelling unit ventilation if the final calculated ventilation rate is less than 16 CFM?**
No, when the calculated ventilation requirement is less than or equal to 15 CFM, dwelling unit ventilation is not required.

ASHRAE Installation

1. **What are the material specifications for an ASHRAE compliant fan?**
Material specifications are identified in ASHRAE 62.2-2016 Section 7.
Selection and Installation: Equipment shall be tested in accordance with ANSI/ASHRAE Standard 51/AMCA 210. Installation shall be in accordance with manufacturer's design requirements and installation instructions.
Sound: A whole-building ventilation fan or continuous local exhaust fan (ASHRAE Fan) shall be rated for sound at a maximum of 1.0 sone; demand-controlled local exhaust fans (bath fan) shall be rated for sound at a maximum of 3.0 sones, unless their maximum rated airflow exceeds 400 cfm.
Termination Point requirement: All exhaust fans in the house must terminate outside at the completion of weatherization work. If more than one exhaust fan shares a common exhaust duct, each fan must be equipped with a back-draft damper to prevent recirculation of exhaust air through the exhaust ducting system.
Label: Switch is properly labeled.
2. **On a house with a flat roof that does not have exhaust fans or access to vent through the roof, how do Subrecipients address exhaust fan installation?**
Through the wall fans, construction of a fur down for fan installation, or installing units in the ceiling with a separate access panel (similar to a plumbing access) to one side to allow for electrical/venting access are common solutions for this type housing. In regard to installing the electrical portion please consult with your licensed electrical contractor, as they will be familiar with how provide a power source to the fan in a retrofit application.
3. **Can we terminate an ASHRAE vent to the attic, existing soffit vent, etc.?**
No. Per Chapter 15, Section M1501.1, of the 2015 IRC the air removed by every mechanical exhaust system shall be discharged to the outdoors in accordance with Section M1506.2. Air shall not be exhausted into an attic, soffit, ridge vent, or crawl space.
4. **How can we ensure compliance with the ASHRAE Standard that requires a "readily accessible manual ON-OFF control" for the dwelling unit ventilation fan?**
A readily accessible manual on-off control, including but not limited to a fan switch or a dedicated branch-circuit overcurrent device shall be provided. Controls shall include text or an icon indicating the system's function. This will allow for maintenance, cleaning, reduce poor outdoor air quality, etc.

Lead Safe

1. Are all workers required to be EPA Lead Renovator Certified?

Each renovation, repair, or painting (RRP) project is required to have an EPA Certified Renovator responsible for ensuring compliance with lead safe work practices. Non-certified workers must be provided on-the-job training for lead safe work practices they will be utilizing while performing their assigned task.

2. Is lead safe work required on all weatherization projects?

Per the current H&S guidance, compliance with EPA's Lead Renovation, Repair, and Painting Program is required for all weatherization Projects.

3. What guidance do we follow regarding when and what triggers LSW work?

If you are going to disturb 6+ sq ft of interior surface, and/or 20+ sq ft for all exterior surfaces, you must follow EPA RRP guidelines. Remember, window replacement is an automatic trigger of EPA RRP requirements in nearly every case. If you believe that you may have an extremely rare case of not triggering EPA requirements during a window replacement consult with TDHCA Department Staff before you begin work.

4. What actions and documentation should we compile for LSW work?

- "Renovate Right" pamphlet given to client with signed/dated "Pre-Renovation Form" in file.
- Please reference: [The Lead-Safe Certified Guide to Renovate Right \(epa.gov\)](http://www.epa.gov/lead-safe-certified-guide-to-renovate-right)
- If RRP rule is triggered:
 - a. "Test Kit" documentation in file (photo or copy)
 - b. Test swap evidence (photo of or actual)
- "Lead-Safe Process Flowchart" indicating what actions were taken and the outcome marked on the flow chart and signed/dated.

Knob & Tube (K&T) Wiring

1. Can K&T wiring be addressed under H&S?

Yes. Current guidance to address K&T can be located within the electrical section of the current *Health and Safety Plan*. A cheat sheet is available upon request.

Use of WRF funds could be another option to consider for situations like this.

2. Can houses with live K&T wiring be weatherized?

K&T wiring is not a reason to disqualify a homeowner from the weatherization program. However, weatherization of K&T homes is a specific task requiring an understanding of how to keep insulation away from the K&T wiring while continuing to weatherize all other aspects of the home.

3. Should Subrecipients insulate attics or walls with live K&T?

The national Electrical Code decreed in 1987 that it would not permit insulation contact with live K&T wiring systems. This guidance prevents wall cavities and/or any portion of the attic floor containing live K&T from being insulated.

The decision whether to insulate a K&T attic is based upon the heat transmission formula and the net R-factor determination. Applying these formulas will determine the net R-value of the attic floor insulation. These formulas can be found on google, or you can ask Department staff for the information as well.

Pests

1. How should our assessors deal with pest issues when they encounter them in the field? What are the health risks? How do we identify them and what is allowable within WAP?

Pest infestation can happen and are sometimes out of the client's control. Mild pest issues can often be eliminated with normal weatherization work such as air sealing, installing screens,

replacing unscreened attic vents, etc. while severe infestations may require unit deferral until the infestation issue can be resolved. Each agency should educate staff on what triggers a pest infestation deferral, and which limited infestation treatments are allowed within program guidelines.

If severe pest infestations are present during the initial assessment that would prevent weatherization, pose health & safety concerns for workers/occupants, or removal is not a viable/cost-effective option, deferral of the unit should be considered until the infestation issue can be resolved. In the majority of cases, resolving the infestations issue will require the client to get involved by taking out and containing of garbage, cleaning, or treating the pest infestation itself. As with any deferral take plenty of photos, provide robust written documentation, and use appropriate deferral procedures if unable to weatherize the home. Always inform the client of observed conditions and associated risks.

2. Is there a threshold associated with H&S costs that would allow us to utilize H&S funds for limited pest removal where infestation would prevent weatherization?

Yes, the current Health and Safety Plan will identify the threshold in section 6.14 within the “Allowable Actions” table.

3. Are there any resources available that we can review for pest identification, associated health risks, and control methods?

Yes, there are some links you can view that could possibly assist you with pest identification/removal efforts

- Pests in your area locator: <http://www.pestworld.org/pest-guide/>
- EPA Pest Control: <https://www.epa.gov/safepestcontrol/got-pests-control-them-safely>
- County offices pest links: <http://npic.orst.edu/pest/countyext.htm>

Mold

1. What guidance do Subrecipients follow regarding when and how to work with, or around, mold-like situations?

In general, if the mold-like substance is 25 contiguous sq. ft or less, there are potential ways to proceed with WAP work. If the mold-like substance is 25+ contiguous sq.ft., deferring the unit, and referring to other professional(s) to remediate the problem is probably the most common option.

2. Can doors and windows be repaired or replaced as a H&S measure due to excessive mold & moisture issues?

Door and window repair is allowable as a H&S measure if it meets the requirements outlined in [WPN 19-5](#)- Page 4. Door and window replacement or installation is not an eligible WAP H&S expense.

3. Within our H&S plan it states that “limited remediation” of conditions that may lead to or promote biological concerns is allowed. What does that mean?

This means that simple repairs that prevent the development of biological concerns such as address leaking sewer pipe, or water intrusion leading to rot may be allowed if the suspected costs to remedy do not exceed the dollar threshold listed with the plan.