

TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS  
**TDHCA Governing Board Approved Draft of the  
2018 Department of Energy (“DOE”) Weatherization Assistance Program (“WAP”) State Plan**

**Disclaimer**

Attached is a draft of the 2018 DOE WAP State Plan that was approved by the TDHCA Governing Board on February 22, 2018. This draft incorporates changes made by the Board as a result of public comment at the meeting. This document, including its preamble, is scheduled to be published in the March 9, 2018 edition of the *Texas Register* and that published version will constitute the official version for purposes of public comment. The version herein is informational only and should not be relied upon as the basis for public comment.

**Public Comment**

**Public Comment Period: Starts: 8AM Austin local time on March 9, 2018 Ends: 5PM Austin local time on March 28, 2018**

Comments received after 5PM Austin local time on March 28, 2018 will not be accepted.

Written comments may be submitted, in hard copy/fax or electronic formats to:

Texas Department of Housing and Community Affairs  
Attn: Gavin Reid  
P.O. Box 13941  
Austin, Texas 78711-3941  
Fax: 512-475-3935  
Email: [gavin.reid@tdhca.state.tx.us](mailto:gavin.reid@tdhca.state.tx.us)

Written comments may be submitted in hard copy, fax, or email formats within the designated public comment period. Those making public comment are encouraged to reference the specific draft rule, policy, or plan related to their comment as well as a specific reference or cite associated with each comment.

Please be aware that all comments submitted to the TDHCA will be considered public information.

**TEXAS DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS**

Street Address: 221 East 11th Street, Austin, TX 78701  
Mailing Address: PO Box 13941, Austin, TX 78711-3941  
Main Number: 512-475-3800 Toll Free: 1-800-525-0657  
Email: [info@tdhca.state.tx.us](mailto:info@tdhca.state.tx.us) Web: [www.tdhca.state.tx.us](http://www.tdhca.state.tx.us)

**APPLICATION FOR FEDERAL ASSISTANCE SF-424**

Version 02

1. Type of Submission: <input type="checkbox"/> Preapplication <input checked="" type="checkbox"/> Application <input type="checkbox"/> Changed/Corrected Application		2. Type of Application: <input type="checkbox"/> New <input checked="" type="checkbox"/> Continuation <input type="checkbox"/> Revision		If Revision, select appropriate letter(s) Other (specify):	
3. Date Received			4. Applicant Identifier:		
5a. Fed Entity Identifier:		5b. Federal Award Identifier: DE-EE0007952			
<b>State Use Only:</b>					
6. Date Received by State: 07/01/2018		7. State Application Identifier: TX-W-200			
<b>8. APPLICANT INFORMATION:</b>					
a. Legal Name: State of Texas					
b. Employer/Taxpayer Identification Number (EIN/TIN): 742610542			c. Organizational DUNS: 806781902		
<b>d. Address:</b>					
Street 1: P.O. BOX 13941					
Street 2:					
City: Austin					
County:					
State: TX					
Province:					
Country: U.S.A.					
Zip / Postal Code: 787113941					
<b>e. Organizational Unit:</b>					
Department Name: Texas Department of Housing and Community Affairs			Division Name: Community Affairs Division		
<b>f. Name and contact information of person to be contacted on matters involving this application:</b>					
Prefix: Mr		First Name: Michael			
Middle Name:					
Last Name: DeYoung					
Suffix:					
Title: Community Affairs Division Director					
Organizational Affiliation: Texas Dept. of Housing and Community Affairs					
Telephone Number: 5124752125		Fax Number: 5124753935			
Email: michael.deyoung@tdhca.state.tx.us					

**APPLICATION FOR FEDERAL ASSISTANCE SF-424**

Version 02

**9. Type of Applicant:**

A State Government

**10. Name of Federal Agency:**

U. S. Department of Energy

**11. Catalog of Federal Domestic Assistance Number:**

81.042

CFDA Title:

Weatherization Assistance Program

**12. Funding Opportunity Number:**

DE-WAP-0002018

Title:

2018 Weatherization Assistance Program Funding

**13. Competition Identification Number:**

Title:

**14. Areas Affected by Project (Cities, Counties, States, etc.):**

Statewide

**15. Descriptive Title of Applicant's Project:**

Provide Statewide Weatherization Assistance

**APPLICATION FOR FEDERAL ASSISTANCE SF-424** Version 02

**16. Congressional District Of:**  
a. Applicant: Texas Congressional District 01                                  b. Program/Project: TX-Statewide  
**Attach an additional list of Program/Project Congressional Districts if needed:**

**17. Proposed Project:**  
a. Start Date: 07/01/2018                                  b. End Date: 06/30/2019

**18. Estimated Funding (\$):**

a. Federal	5,480,562.00
b. Applicant	0.00
c. State	0.00
d. Local	0.00
e. Other	0.00
f. Program Income	0.00
g. TOTAL	5,480,562.00

**19. Is Application subject to Review By State Under Executive Order 12372 Process?:**  
 a. This application was made available to the State under the Executive Order 12372 Process for review on:  
 b. Program is subject to E.O. 12372 but has not been selected by the State for review.  
 c. Program is not covered by E.O. 12372

**20. Is the applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation)**  
No

**21. By signing this application, I certify (1) to the statements contained in the list of certifications\*\* and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances\*\* and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code Title 218, Section 1001)**  
  
 I AGREE  
  
\*\* The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

**Authorized Representative:**  
Prefix: Mr                                  First Name: Timothy  
Middle Name: K.  
Last Name: Irvine  
Suffix:  
Title: Executive Director  
Telephone Number: 5124753296                                  Fax Number: 5124753858  
Email: tim.irvine@tdhca.state.tx.us

Signature of Authorized Representative: Date Signed:  
  
Authorized for Local Reproduction Standard Form 424 (Revised 10/2005)  
Prescribed by OMB Circular A-102

**BUDGET INFORMATION - Non-Construction Programs**

1. Program/Project Identification No. EE0007952		2. Program/Project Title Weatherization Assistance Program	
3. Name and Address State of Texas P.O. BOX 13941 Austin, TX 787113941		4. Program/Project Start Date 07/01/2018	5. Completion Date 06/30/2019

**SECTION A - BUDGET SUMMARY**

Grant Program Function or Activity (a)	Federal Catalog No. (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. 2018 WAP Formula Funds	81.042	\$ 2,000,000.00		\$ 5,480,562.00		\$ 7,480,562.00
2. STATE			\$ 0.00		\$ 0.00	\$ 0.00
3.						
4.						
5. TOTAL		\$ 2,000,000.00	\$ 0.00	\$ 5,480,562.00	\$ 0.00	\$ 7,480,562.00

**SECTION B - BUDGET CATEGORIES**

6. Object Class Categories	Grant Program, Function or Activity				Total (5)
	(1) GRANTEE ADMINISTR ATION	(2) SUBGRANTE E ADMINISTR	(3) GRANTEE T&TA	(4) SUBGRANT EE T&TA	
a. Personnel	\$ 148,906.00	\$ 0.00	\$ 158,343.00	\$ 0.00	\$ 307,249.00
b. Fringe Benefits	\$ 37,227.00	\$ 0.00	\$ 39,586.00	\$ 0.00	\$ 76,813.00
c. Travel	\$ 0.00	\$ 0.00	\$ 27,720.00	\$ 0.00	\$ 27,720.00
d. Equipment	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
e. Supplies	\$ 2,000.00	\$ 0.00	\$ 2,004.00	\$ 0.00	\$ 4,004.00
f. Contract	\$ 0.00	\$ 511,032.00	\$ 22,030.00	\$ 806,542.00	\$ 6,923,400.00
g. Construction	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
h. Other Direct Costs	\$ 4,008.00	\$ 0.00	\$ 950.00	\$ 0.00	\$ 4,958.00
i. Total Direct Charges	\$ 192,141.00	\$ 511,032.00	\$ 250,633.00	\$ 806,542.00	\$ 7,344,144.00
j. Indirect Costs	\$ 66,114.00	\$ 0.00	\$ 70,304.00	\$ 0.00	\$ 136,418.00
k. Totals	\$ 258,255.00	\$ 511,032.00	\$ 320,937.00	\$ 806,542.00	\$ 7,480,562.00
7. Program Income	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00

**BUDGET INFORMATION - Non-Construction Programs**

1. Program/Project Identification No. EE0007952		2. Program/Project Title Weatherization Assistance Program	
3. Name and Address State of Texas P.O. BOX 13941 Austin, TX 787113941	4. Program/Project Start Date 07/01/2018		
	5. Completion Date 06/30/2019		

SECTION A - BUDGET SUMMARY						
Grant Program Function or Activity (a)	Federal Catalog No. (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1.						
2.						
3.						
4.						
5. TOTAL		\$ 2,000,000.00	\$ 0.00	\$ 5,480,562.00	\$ 0.00	\$ 7,480,562.00

SECTION B - BUDGET CATEGORIES						
6. Object Class Categories	Grant Program, Function or Activity				Total (5)	
	(1) PROGRAM OPERATION S	(2) HEALTH AND SAFETY	(3) LIABILITY INSURANCE	(4) FINANCIAL AUDITS		
a. Personnel	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 307,249.00	
b. Fringe Benefits	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 76,813.00	
c. Travel	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 27,720.00	
d. Equipment	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	
e. Supplies	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 4,004.00	
f. Contract	\$ 4,350,175.00	\$ 1,087,544.00	\$ 128,477.00	\$ 17,600.00	\$ 6,923,400.00	
g. Construction	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	
h. Other Direct Costs	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 4,958.00	
i. Total Direct Charges	\$ 4,350,175.00	\$ 1,087,544.00	\$ 128,477.00	\$ 17,600.00	\$ 7,344,144.00	
j. Indirect Costs	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 136,418.00	
k. Totals	\$ 4,350,175.00	\$ 1,087,544.00	\$ 128,477.00	\$ 17,600.00	\$ 7,480,562.00	
7. Program Income	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	

**U.S. Department of Energy  
WEATHERIZATION ASSISTANCE PROGRAM (WAP)  
WEATHERIZATION ANNUAL FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

**IV.1 Subgrantees**

<b>Subgrantee (City)</b>	<b>Planned Funds/Units</b>
Alamo Area Council of Governments (San Antonio)	\$544,678.00 52
BakerRipley (Houston)	\$815,104.00 80
Big Bend Community Action Committee (Marfa)	\$118,480.00 8
Brazos Valley Community Action Program (College Station)	\$236,703.00 19
Combined Community Action, Inc. (Giddings)	\$165,890.00 12
Community Action Committee of Victoria Texas (Victoria )	\$217,089.00 17
Community Action Corporation of South Texas (Alice)	\$730,410.00 71
Community Council of South Central Texas, Inc (Seguin)	\$154,545.00 11
Concho Valley Community Action Agency (San Angelo)	\$143,400.00 10
Dallas County Health & Human Services (Dallas)	\$525,927.00 50
Economic Opportunities Advancement Corporation (Waco)	\$206,328.00 16
El Paso Community Action Program, Project Bravo (El Paso)	\$313,085.00 27
Fort Worth, City of (Fort Worth)	\$322,006.00 29
Greater East Texas Community Action Program (Nacogdoches)	\$606,855.00 59
Hill Country Community Action Association, Inc. (San Saba)	\$197,922.00 15
Nueces County Community Action Agency (Corpus Christi)	\$131,839.00 9
Panhandle Community Services (Amarillo)	\$201,026.00 16
Rolling Plains Management Corporation (Crowell)	\$296,018.00 25
South Plains Community Action Association, Inc. (Levelland)	\$185,185.00 14
Texoma Council of Governments (Sherman)	\$359,112.00 33
Travis County Health and Human Services and Veterans Services (Austin)	\$218,345.00 17
West Texas Opportunities (Lamesa)	\$199,218.00 16
<b>Total:</b>	<b>\$6,889,165.00</b> <b>606</b>

**U.S. Department of Energy  
WEATHERIZATION ASSISTANCE PROGRAM (WAP)  
WEATHERIZATION ANNUAL FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

**IV.2 WAP Production Schedule**

<b>Weatherization Plans</b>	<b>Units</b>
Total Units (excluding reweatherized)	606
Reweatherized Units	0

Note: Planned units by quarter or category are no longer required, no information required for persons.

<b>Average Unit Costs, Units subject to DOE Project Rules</b>		
<b>VEHICLE &amp; EQUIPMENT AVERAGE COST PER DWELLING UNIT (DOE RULES)</b>		
A	Total Vehicles & Equipment (\$5,000 or more) Budget	\$0.00
B	Total Units Weatherized	606
C	Total Units Reweatherized	00
D	Total Dwelling Units to be Weatherized and Reweatherized (B + C)	606
E	Average Vehicles & Equipment Acquisition Cost per Unit (A divided by D)	\$0.00
<b>AVERAGE COST PER DWELLING UNIT (DOE RULES)</b>		
F	Total Funds for Program Operations	\$4,350,175.00
G	Total Dwelling Units to be Weatherized and Reweatherized (from line D)	606
H	Average Program Operations Costs per Unit (F divided by G)	\$7,178.51
I	Average Vehicles & Equipment Acquisition Cost per Unit (from line E)	\$0.00
J	Total Average Cost per Dwelling (H plus I)	\$7,178.51

**IV.3 Energy Savings**

Method used to calculate savings: <input checked="" type="checkbox"/> WAP algorithm <input type="checkbox"/> Other (describe below)			
	Units	Savings Calculator (MBtus)	Energy Savings
This Year Estimate	606	29.3	17756
Prior Year Estimate	439	29.3	12863
Prior Year Actual	162	29.3	4747

**Method used to calculate savings description:**

**IV.4 DOE-Funded Leveraging Activities**

N/A

**IV.5 Policy Advisory Council Members**

Check if an existing state council or commission serves in this category and add name below

Combined Community Action Inc.	Type of organization: Non-profit (not a financial institution) Contact Name: Kelly Franke Phone: (979)540-2985 Email: <a href="mailto:KJFranke@craction.com">KJFranke@craction.com</a>
Greater East Texas Community Action Program	Type of organization: Non-profit (not a financial institution) Contact Name: Karen Swenson, Executive Director Phone: (936)564-2491 Email: <a href="mailto:kswenson@sbcglobal.net">kswenson@sbcglobal.net</a>
Health and Human Services Commission	Type of organization: Unit of State Government Contact Name: Toni Packard Phone: 5124384290 Email: <a href="mailto:toni.packard@hhsc.state.tx.us">toni.packard@hhsc.state.tx.us</a>



**U.S. Department of Energy  
WEATHERIZATION ASSISTANCE PROGRAM (WAP)  
WEATHERIZATION ANNUAL FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

**IV.6 State Plan Hearings (Note: attach notes and transcripts to the SF-424)**

<b>Date Held</b>	<b>Newspapers that publicized the hearings and the dates the notice ran</b>
03/27/2018	Public Hearing for the DOE Plan begins at 5:00 pm (CST).
02/22/2018	Draft plan and Notice of Public Hearing posted on the TDHCA website; public listserve announcement sent announcing availability of plan and public hearing details.
03/28/2018	WAPAC meeting regarding DOE Plan.
04/26/2018	Final DOE Plan and list of awardees to be presented at TDHCA Board of Directors meeting for approval. The meeting will also serve as the final Public Hearing.
03/28/2018	Comment period will end at 5:00 pm (CST).
03/09/2018	Announcement of Public Hearing published in Texas Register. Public comment period begins.
02/22/2018	TDHCA Board of Directors authorizes release of draft plan for public comment.

**IV.7 Miscellaneous**

**Recipient Business Officer**

Michael De Young  
[Michael.deyoung@tdhca.state.tx.us](mailto:Michael.deyoung@tdhca.state.tx.us)  
221 East 11th Street  
Austin, Texas 78701  
(512) 475-2125

**Recipient Principal Investigator**

Michael De Young  
[Michael.deyoung@tdhca.state.tx.us](mailto:Michael.deyoung@tdhca.state.tx.us)  
221 East 11th Street  
Austin, Texas 78701  
(512) 475-2125

**Policy Advisory Council**

The Policy Advisory Council ("PAC") is broadly representative of organizations and agencies and provides balance, background, and sensitivity with respect to solving the problems of low-income persons, including weatherization and energy conservation problems. Historically, the PAC has met annually after the public hearing for the DOE plan.

The low-income elderly population is represented by the PAC members from Combined Community Action and the Greater East Texas Community Action Program. The low-income persons with disabilities population is represented by the PAC member from the Health and Human Services Commission.

**Liability Insurance**

The liability insurance separate line item includes pollution occurrence insurance in addition to the general liability insurance. Most regular liability insurance policies do not provide coverage for potential effects of many health and safety measures, such as lead disturbances and other pollution occurrence items. The Department strongly recommends the Subgrantees require their contractors to carry pollution occurrence insurance to avoid liability for any mistakes the contractors may make. Each Subgrantee should get a legal opinion regarding the best course to take for implementing the pollution occurrence insurance coverage.

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

This worksheet should be completed as specified in Section III of the Weatherization Assistance Program Application Package.

**V.1 Eligibility**

**V.1.1 Approach to Determining Client Eligibility**

Provide a description of the definition of income used to determine eligibility

Applicants whose income is at or below 200% of the Federal Poverty Income Guidelines are eligible for the DOE Weatherization Program.

Describe what household Eligibility basis will be used in the Program

During the LIHEAP application process, households will be screened for DOE Weatherization benefits and determined eligible if their income is at or below 200% of the Federal Poverty Income Guidelines.

Describe the process for ensuring qualified aliens are eligible for weatherization benefits

The Welfare Reform Act, officially referred to as the Personal Responsibility and Work Opportunity Act of 1996, H.R. 3734, placed specific restrictions on the eligibility of aliens for "Federal means-tested public benefits" for a period of five years. As defined in a Federal Register notice dated August 26, 1997 (62 FR 45256) the Department of Health and Human Services (HHS) is interpreting "Federal means-tested public benefits" to include only those benefits provided under Federal means-tested, mandatory spending programs. HHS Information Memorandum LIHEAP-IM-25 dated August 28, 1997, states that all qualified aliens, regardless of when they entered the U.S., continue to be eligible to receive assistance and services under the Low-Income Home Energy Assistance Program (LIHEAP) if they meet other program requirements.

To ensure program continuity between LIHEAP and DOE Weatherization for the many Subgrantees operating both programs, the DOE Weatherization Assistance Program will follow the interpretation as adopted by HHS. A possible area of confusion resides in the types of local agencies that are exempt/nonexempt from "status verification requirements." Local agencies that are both charitable and nonprofit would be exempt, which comprise about three-quarters of the local agency network. However, those agencies which are designated as local government agencies operating the Weatherization Assistance Program and do not subgrant eligibility determination to a qualified nonprofit organization would not be exempt and, therefore, must conduct "status verification." WAP Subgrantees that are not exempt shall use the Systematic Alien Verification for Entitlements (SAVE) system to verify the status of qualified aliens that apply for weatherization services. The Department has provided training to those entities required to use the SAVE system.

The DOE and LIHEAP WAP are in compliance with **LIHEAP-IM-99-10 issued June 15, 1999 states that weatherization in a multifamily building is not a covered activity for status verification.**

**V.1.2 Approach to Determining Building Eligibility**

Procedures to determine that units weatherized have eligibility documentation

Subgrantees maintain a client file for each unit weatherized, including documented proof that the dwelling unit is an eligible dwelling unit as defined in 10 CFR §440.22. The Department determines that weatherized units have eligibility documentation during monitoring reviews.

Describe Reweatherization compliance

Texas limits reweatherization to 5% of all units weatherized. To ensure the cap is not exceeded, Subgrantees may not reweatherize a unit without prior approval from the Department.

Reweatherization will be allowed on units that have received weatherization prior to September 30, 1994. A new energy audit must be conducted on each unit reweatherized.

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

Describe what structures are eligible for weatherization

10 TAC §6.403 includes the following definitions which describe structures eligible for weatherization:

Dwelling Unit--A house, including a stationary mobile home, an apartment, a group of rooms, or a single room occupied as separate living quarters.

Multifamily Dwelling Unit--A structure containing more than one Dwelling Unit.

Rental Unit--A Dwelling Unit occupied by a person who pays rent for the use of the Dwelling Unit.

Shelter--A Dwelling Unit or units whose principal purpose is to house on a temporary basis individuals who may or may not be related to one another and who are not living in nursing homes, prisons, or similar institutional care facilities.

Describe how Rental Units/Multifamily Buildings will be addressed

In accordance with 10 CFR §440.22(b)(3), the Department requires that Subgrantees keep on file procedures that address protection of renters' rights, to ensure:

- Written permission of the building owner or his agent before commencing work.
- Cash/in-kind contribution from building owner when feasible.
- Benefits of the services accrue primarily to the low-income tenants residing in such units.
- For a reasonable period of time after completion, the household will not be subjected to rent increases (unless those increases are demonstrably related to other matters other than the weatherization work performed).
  - There are adequate procedures whereby the Grantee can receive tenant complaints and owners can appeal, should rental increases occur.
- No undue or excessive enhancement shall occur to the value of the dwelling unit.
- To secure the federal investment and to address issues of eviction from and sale of property, per 10 CFR §440.22(c), Grantees may seek landlord agreement to placement of a lien (or other contractual restrictions) upon the property being weatherized.

The Department will abide by 10 CFR §440.22, ensuring that not less than 66% of the eligible building units (50% for duplexes and four-unit buildings, and certain eligible types of large multifamily buildings) are eligible units or will become eligible dwelling units within 180 days under a Federal, State or local government program for rehabilitating the building or making similar improvements. WPN 016 provides guidance on Department of Housing and Urban Development ("HUD") and Department of Agriculture ("USDA") multifamily buildings that have been pre-determined to meet income eligibility guidelines. WPN 016 provides guidance on the review and verification required for those buildings. Assessments and client file documentation for rental units and multifamily units are also detailed in the Multifamily Weatherization Best Practice posted on the Department's website at <http://www.tdhca.state.tx.us/community-affairs/wap/docs/WAP-BP-MFWeatherization.pdf>.

Because large multifamily buildings have different audit requirements, Subgrantees must obtain prior written approval through the Department to use the 50% eligibility, and DOE must approve the proposed activity. The Department will seek DOE approval.

Describe the deferral Process

A Dwelling Unit shall not be weatherized when there is a potentially harmful situation that may adversely affect the occupants or the Subgrantee's weatherization crew and staff, or when a Dwelling Unit is found to have structural concerns that render the Dwelling Unit unable to benefit from weatherization. The Subgrantee must declare their intent to defer weatherization on an eligible unit on the assessment form. The assessment form must include the client's name and address, dates of the assessment, and the date on which the client was informed of the issue in writing. The written notice to the client must include a clear description of the problem, conditions under which weatherization could continue, the responsibility of all parties involved, and any rights or options the client has. A copy of the notice must be given to the client, and a signed copy placed in the client application file. Only after the issue has been corrected to the satisfaction of the Subgrantee shall weatherization work begin.

If structural concerns or health and safety issues identified (which would be exacerbated by any weatherization work performed) on an individual unit cannot be abated within program rules or within the allowable WAP limits, the unit exceeds the scope of this program.

Should a client request a second opinion on a deferral or walk-away, the Subgrantee is encouraged to contact the appropriate local government inspector to request an inspection of the site. Should the client refuse to have a local government inspector inspect the unit, the crew will note the refusal in the client file, and

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

no work shall be performed on the unit. If the inspector deems that work pending deferral can or should be performed, crews/contractors and contractors are encouraged to work with the inspector's suggestions to make the improvements. However, the inspector does not make the final determination on the amount of work, cost of work, or measures applied to the unit. Should the Subgrantee deem the suggested measures to be financially or programmatically out of the scope of weatherization, the Subgrantee may defer the weatherization work on the unit. Documentation of this determination, whether the weatherization is completed or not, must be included in the client file.

Crewmembers or contractors who work on a unit that could or should be a deferral or walk-away do so at their own risk.

**V.1.3 Definition of Children**

Definition of children (below age): **18**

**V.1.4 Approach to Tribal Organizations**

Recommend tribal organization(s) be treated as local applicant?

If YES, Recommendation. If NO, Statement that assistance to low-income tribe members and other low-income persons is equal.

The 70th Texas Legislature created the Native American Restitutionary Program (Oil Overcharge Restitutionary Act, Texas Government Code, Chapter 2305) for the purposes of providing oil overcharge restitution to the Texas Native Americans. In the Texas WAP, the Native-American Indian population is treated and served in the same manner as other applicants.

**V.2 Selection of Areas to Be Served**

The Texas WAP is available to eligible low-income households in all 254 counties of the state. Subgrantees are held responsible for all intake, eligibility, and weatherization activities. If the Subgrantees' performance record is satisfactory according to both state and federal regulations, then the Department may offer to renew the contract if the Subgrantee so desires. The Department's award committee may decline to recommend an award or place additional conditions on an award based upon its previous participation review as outlined in 10 TAC §1.302.

New or additional DOE subgrantees for counties that become unserved by the DOE WAP will be selected according to DOE regulations found in 10 CFR §440.15 and 10 TAC §1.302. If the Department determines it is necessary to permanently reassign a service area to a new subgrantee, the subgrantee will be chosen in accordance with 10 CFR §440.15. A new or additional subgrantee is defined as a CAA or other public or nonprofit entity that is not currently operating a Department-funded Weatherization Assistance Program. All counties are served by 22 existing entities.

(The Department may deobligate all or part of the funds provided under this contract as outlined in 10 TAC §6.405. A Subgrantee's failure to expend the funds provided under this State plan in a timely manner may also result in the Subgrantee's ineligibility to receive additional funding during the program year.)

**Formula Distribution**

The Department updates the budget allocation proportion by county and Subgrantee based on poverty income, elderly poverty, median household income (from the 2010 U.S. Census data), and climate data (from the National Climatic Data Center, Climate Normals, 2010), as outlined in 10 TAC §6.404.

The Department allocates funds to Subgrantees by applying a formula based upon the DOE allocation for program year; or if the allocation amount is not known, based on an assumption of level funding from the previous program year. Once the allocation amount is known, the formula is re-run. The allocation formulas reflect the 2010 Census data. If any carryover funds are available, they will be distributed by allocation formula and used to increase the number of units to be weatherized. The Department will adjust guidance to reflect the adjusted average expenditure limit per unit for the program year.

The fund allocations for individual service areas are determined by a 5-factor distribution formula as outlined in 10 TAC §6.404:

- (1) Number of non-elderly poverty households per county;
- (2) Number of elderly poverty households per county;
- (3) Median income variance per county;
- (4) Inverse poverty household density ratio per county; and

**U.S. Department of Energy  
WEATHERIZATION ASSISTANCE PROGRAM (WAP)  
STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

(5) Heating/Cooling Degree days per county.

**V.3 Priorities for Service Delivery**

The Department will ensure by contract that its Subgrantees give priority to weatherizing dwellings owned or occupied by low-income persons who are particularly vulnerable such as the Elderly, Persons with Disabilities, Families with Young Children, Households with High Energy Burden, and Households with High Energy Consumption. Applicants from these groups must be placed at the top of a Subgrantee's waiting list. The Department ensures that Subgrantees give proper attention to these requirements through monitoring/evaluation of the Subgrantee.

**V.4 Climatic Conditions**

The climatic conditions for the State of Texas are imbedded in the algorithms of the Weatherization Assistant (WA 8.9) energy audit software tool engineered by the Oak Ridge National Laboratory for the Department of Energy. As part of the energy audit modeling, the Department requires the Subgrantee Network to select the nearest weather station to the dwelling units. The Weather files imbedded in the WA 8.9 contains 30 year data of Heating and Cooling degree days for each weather station.

As described in the report prepared by the Pacific Northwest National Laboratory & Oak Ridge National Laboratory for the Department of Energy, the state of Texas has several IECC climate zones. [http://apps1.eere.energy.gov/buildings/publications/pdfs/building\\_america/ba\\_climateguide\\_7\\_1.pdf](http://apps1.eere.energy.gov/buildings/publications/pdfs/building_america/ba_climateguide_7_1.pdf). These climate zones are used as an aid in helping Subgrantees to identify the appropriate climate designation for the counties in which they are providing WAP services. In addition to prescribing appropriate mechanical equipment (example of climate specific measures would be evaporative cooling which may be prescribed in the Hot Dry climate of Texas and not in the Mixed Humid part of Texas) the IRC prescriptive thermal envelope of measures are different. The climate zones found in Texas are as follows:

**1. Hot-Humid**

A hot-humid climate is defined as a region that receives more than 20 inches (50 cm) of annual precipitation and where one or both of the following occur:

- A 67°F (19.5°C) or higher wet bulb temperature for 3,000 or more hours during the warmest six consecutive months of the year; or
- A 73°F (23°C) or higher wet bulb temperature for 1,500 or more hours during the warmest six consecutive months of the year.

IRC Prescriptive Thermal Envelope Measures:

<b>Zone 2A and 2B</b>		<b>Zone 3A</b>
Ceiling	R 38	R38
Windows	U 0.40	U 0.35
Walls	R-13	R-13 + 5
Floors	R – 13	R 19
SHGC	0.25	0.25

**2. Hot-Dry**

A hot-dry climate is defined as a region that receives less than 20 inches (50 cm) of annual precipitation and where the monthly average outdoor temperature remains above 45°F (7°C) throughout the year.

IRC Prescriptive Thermal Envelope Measures:

<b>Zone 3A and 3B</b>	
Ceiling	R38
Windows	U0.35

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

(Grant Number: EE0007952, State: TX, Program Year: 2018)

Walls	R13 + 5
Floors	R 19
SHGC	.025

---

**3. Mixed-Humid**

A mixed-humid climate is defined as a region that receives more than 20 inches (50 cm) of annual precipitation, has approximately 5,400 heating degree days (65°F basis) or fewer, and where the average monthly outdoor temperature drops below 45°F (7°C) during the winter months.

IRC Prescriptive Thermal Envelope Measures:

---

**Zone 3A**

Ceiling	R38
Windows	U 0.35
Walls	R13 + 5
Floors	R 19
SHGC	.025

---

**4. Mixed-Dry**

A mixed-dry climate is defined as a region that receives less than 20 inches (50 cm) of annual precipitation, has approximately 5,400 heating degree days (50°F basis) or less, and where the average monthly outdoor temperature drops below 45°F (7°C) during the winter months.

IRC Prescriptive Thermal Envelope Measures:

---

**Zone 4**

Ceiling	R49
Windows	U 0.35
Walls	R13 + 5
Floors	R 19

---

In addition to the 2015 IRC adopted by the State of Texas, several individual cities have adopted amendments to the code. The adoption and amendments to the 2015 IRC impact the WA 8.9 energy audits in that cities are required to evaluate user defined measures to meet the codes adopted by each individual City.

**V.5 Type of Weatherization Work to Be Done**

**V.5.1 Technical Guides and Materials**

**Technical Guides and Materials**

<http://www.tdhca.state.tx.us/community-affairs/wap/guidance.htm>

**Weatherization Tools and Guides**

- [WAP Production Schedule/Tool \(XLS\)](#) – Revised 12.30.16
- [Weatherization Assistance \(NEAT\) – Student Guide \(PDF\)](#) - Revised 11.9.15
- [Single-Family Homes: Standard Work Specifications Field Guide \(PDF\)](#)
- [Manufactured Housing: Standard Work Specifications Field Guide \(PDF\)](#)
- [Weatherization FAQs Answered by TDHCA \(PDF\)](#) – Revised 10.20.17
- [DOE-WAP Timeline \(PDF\)](#) Revised 10.30.15
- [LIHEAP-WAP Timeline \(PDF\)](#) Revised 10.30.15
- [Material Installation Standards Manual \(2012\) \(PDF\)](#)
- [Weatherization Field Guide \(2010\)](#)
- [Mechanical Systems Field Guide \(2010\)](#)
- [Exhaust Fan Flow Meter Quick Guide \(PDF\)](#)

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

- [International Energy Conservation Code \(IECC\) Requirements \(energycode.pnl.gov\)](#)
- [Weatherization Reporting Instructions](#)
- [Weatherization Monthly Performance Report](#)
- [LIHEAP Performance Measures Module User Guide \(PDF\)](#)
- [Checking WAP Reports](#)

**Program Administration Forms**

- [DOE Budget Amendment Form \(XLS\)](#)
- [LIHEAP Budget Amendment Form \(XLS\)](#)
- [WAP Inventory List: Tools and Equipment \(DOC fillable\)](#)
- [Quality Control Inspection \(QCI\) Form](#)

**Assessment Calculators**

- [AC Replacement Calculator \(XLS\)](#)
- [Degradation Calculator \(XLS\)](#)
- [Refrigerator Replacement Calculator \(XLS\)](#)
- [Sidewall Density Calculation Sheet \(XLS\)](#)
- [ASHRAE 62.2 Calculator](#) (www.residentialenergydynamics.com)

**Client and Field Assessment Forms**

- [QCI Final Inspection Certification Form \(PDF\)](#)
- [Health & Safety Client Questionnaire & Inspection Checklist \(PDF\)](#)
- [LIHEAP Priority List \(PDF\)](#) – Revised January 2017
- [Blower Door and Duct Blower Data Sheet \(XLS\)](#)
- [Unified Notification Form \(PDF\)](#) – Revised July 2011
- [Mold-Like Substance Notification and Release Form \(PDF\)](#)
- [Consumer Mold Information Sheet \(PDF\)](#)
- [Whole House Assessment Sheet \(XLSX\)](#)
- [Refrigerator Replacement Form \(DOC fillable\)](#)
- [Landlord Permission to Perform Assessment \(PDF\)](#)
- [Multi-Family Project Preparation/Completion Checklist \(PDF\)](#)
- [Wall/Attic Inspection Form \(XLS\)](#)
- [Building Weatherization Report \(BWR\) \(XLS\)](#) – Revised January 2017

Further, the Department has several Weatherization Best Practices posted at: <http://www.tdhca.state.tx.us/communityaffairs/wap/wapbestpractices.htm>.

Best Practices are developed based upon repeat questions that require more clarity than simply an FAQ. These have proved highly effective in multiple ways: increased compliance, better understanding on how to assess and proceed, increased consistency across the Network, and reduction in calls for same issues. They often have multiple references and are based upon sound building science principles.

All Subrecipient agreements and vendor contracts active in PY 2015 and beyond contain language which clearly documents the SWS specifications for work quality outlined in WPN 154, Section 2. A signed contract shall confirm that the organization understands and agrees to these expectations. Each contract includes a substantially equivalent clause or exhibit:

**Materials and Work Standards**

- A. Subrecipient shall weatherize eligible dwelling units using only weatherization materials which meet or exceed the standards prescribed by DOE in Appendix A of 10 CFR Part 440.
- B. All weatherization measures installed shall meet or exceed the standards prescribed by DOE in Weatherization Program Notice (WPN) 15-4 regarding Standard Work Specifications, as detailed in the Department's Standard Work Specifications.
- C. All weatherization work must be performed in accordance to the DOE approved energy audit procedures, 10 CFR Part 440 Appendix A, State of Texas adopted International Residential Code (or that of jurisdictions authorized by State law to adopt later editions).

Subgrantee will include the substance of this section in all subcontracts

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

**V.5.2 Energy Audit Procedures**

Audit Procedures and Dates Most Recently Approved by DOE

<b>Single-Family :</b>	NEAT: DOE Approved June 2, 2016
<b>Manufactured Housing :</b>	MHEA: DOE Approved June 2, 2016
<b>Multi-Family :</b>	NEAT: 5-24 individually heated and cooled units - DOE Approved June 2, 2016

Comments

**V.5.3 Final Inspection**

The Department has provided Subgrantees with sufficient T&TA funding to obtain and/or maintain required QCI and MF-QCI certifications by an IREC certified training provider. The Department tracks Subgrantee compliance with unit inspection requirements of WPN 15-4.

The Department has four certified QCI staff, who maintain their certifications. The Department annually requires all Subgrantees to report the following for determining the number of units that the Department will inspect for compliance at each agency:

- Option 1 (at minimum 5% compliance final inspection required)= With multiple QCI staff, this Subrecipient will NOT allow the QCI staff member who conducts the Final Inspection on any/every DOE-funded/reported unit to perform any other aspect(s) associated with that same unit.  
Example: Initial Assessment; NEAT Audit; Work Order; etc
- Option 2 (10% compliance final inspection required)= With limited QCI staff, this Subgrantee will have a QCI staff member conduct the Final Inspection on any/every DOE-funded/reported unit AND will also perform other aspect(s) associated with that same unit.  
Example: Initial Assessment; NEAT Audit; Work Order; etc
- Option 3 (5% compliance final inspection required) = This Subgrantee typically has an independent third-party QCI contractor.
- **NOTE:** As scheduling permits, compliance will conduct 10% final inspections on completed units for Options 1 and 3, as well.

Six Subgrantees have multiple QCI Staff with separation of duties, twelve have limited QCI, and four are using third-party QCIs. All units are inspected by a certified QCI. In addition to final inspections, a completed QCI Final Inspection Certification Form is required. [QCI Final Inspection Certification Form \(PDF\)](#).

The Network is required to follow work standards as per the SWS guidelines. This requirement is within Subgrantee contracts, and the SWS guide is posted on the Department [Program Guidance](#) Webpage.

All units must meet DOE requirements and pass a QCI inspection. Any unit that fails to be brought into compliance results in disallowed costs and a finding for the reason(s) of the disallowed cost is issued in the monitoring report. The initial T&TA response to any findings is email guidance providing resources to resolve the findings by the training team. This is then followed by individualized T&TA, or a referral to the appropriate Tier 1 training provider, as deemed appropriate.

**V.6 Weatherization Analysis of Effectiveness**

Pursuant to 10 TAC, Chapter 1, Subchapter C, §1.302, a review of a Subgrantee's compliance history in Department programs must be approved by the Department's Executive Award and Review Advisory Committee ("EARAC") and provided to the Department's Board of Directors in order that the Board may consider the compliance history and make and document its award decisions with full knowledge of these matters. Prior to the award of DOE funds to any Subgrantee, EARAC reviews:

1. Summary information regarding findings identified during the last three years; and
2. If the Subgrantee is subject to the requirement of an annual single audit:
  - A. A report of any required single audit or single audit certification form that is currently past due; and
  - B. If such single audit has been submitted and the most recent single audit report contained findings, a copy of that single audit.



**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

The Subrecipient Monitoring section, within the Compliance Division, submits information regarding its monitoring activity to EARAC. If EARAC finds that a Subgrantee has outstanding monitoring issues, their WAP award may be subject to conditions intended to avoid future noncompliance.

Issues identified during this review point to areas in a Subgrantee that require attention, both from a monitoring standpoint and a T&TA standpoint. The reviews not only hold the Subgrantee accountable, they also give the monitoring and T&TA sections guidance in planning future activities.

T&TA staff is copied on all monitoring reports and/or a staff meeting is held for monitors to debrief T&TA staff after each visit. In those meetings, monitoring staff relay issues found related to individual Subgrantee, as well as, overall trends identified. Following the monitoring report, T&TA staff provide initial email to Subgrantee to provide resources for identified issues. T&TA staff applies debrief information when determining the needs for agency-wide specific T&TA and to plan the curriculum for regional trainings.

Further, Subgrantee performance is reviewed periodically and at the end of the program year. The Department tracks Subgrantee performance over time by reviewing their monthly production and expenditure reports. T&TA staff review the reports submitted by a certain number of Subgrantee's and plans activities and the provision of T&TA when necessary. Analysis of reports includes the following:

- Number of homes completed;
- Number of applications pending;
- Number of homes in progress;
- Contract amount;
- Total funds expended;
- Balance of funds; and
- Special comments

**V.7 Health and Safety**

Attached to SF-424

**V.8 Program Management**

**V.8.1 Overview and Organization**

The Department is the state's lead agency responsible for affordable housing and community assistance programs. The Department annually administers funds derived from mortgage revenue bond financing and refinancing, federal grants, and federal tax credits.

In 1991, the 72nd Texas Legislature created the Department. The Department's enabling legislation combined programs from the Texas Housing Agency, the Community Development Block Grant Program from the Texas Department of Commerce, and the Texas Department of Community Affairs.

On September 1, 1992, two programs were transferred to the Department from the Texas Department of Human Services: the Low Income Home Energy Assistance Program and the Emergency Nutrition and Temporary Emergency Relief Program. Effective September 1, 1995, in accordance with House Bill 785, regulation of manufactured housing was transferred to the Department. In accordance with House Bill 7, effective September 1, 2002, the Community Development Block Grant and Local Government Services Programs were transferred to the newly created Office of Rural Community Affairs. Effective September 1, 2002, in accordance with Senate Bill 322, the Manufactured Housing Division became an independent entity administratively attached to TDHCA. As a state agency, the Department is under the authority of the Governor of the State of Texas.

The Department's services are offered through three program categories: Single Family Programs, Multifamily Finance Production, and Community Affairs, which administers the WAP.

The Department subcontracts with a network of Subgrantees that provide the WAP services. The network is comprised of community action agencies (CAAs), regional Councils of Government (COGs), and organizations in the other public or private nonprofit entity category (PPNPs). All network Subgrantees are

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

provided a draft copy of the yearly weatherization state plan and a notice of the state public hearing. The Public and all Subgrantees are invited and encouraged to participate in the public comment process.

Historically, the regular weatherization program year ran from April through March. Starting PY 2015, the weatherization program year has run from July through June.

The Department will continue to administer the program through Subgrantees in accordance with 10 CFR §440.15 provisions and State regulations. If existing Subgrantees are successfully administering the Program, the Department will offer to renew the contract if the Subgrantee so desires and if grant funds are available. When the Department determines that an organization is not administering the program satisfactorily, it may take the following action:

- Correction of the problem(s) with training or technical assistance;
- Re-assignment of the service area (or service area portion) to another Department existing Subgrantee; or
- Solicitation or selection of a new or additional Subgrantee in accordance with 10 CFR §440.15 provisions.

A new or additional Subgrantee is defined as a CAA or other public or nonprofit entity that is not currently operating a DOE Weatherization Assistance Program.

Consolidation/downsizing: Any downsizing will occur through normal attrition, through a Subgrantee's determination that it can no longer administer the program efficiently/effectively, or through the Department's determination that a Subgrantee can no longer administer the program efficiently/effectively.

Reassignment of service areas for just cause: In the event that a service area can no longer be served by a Subgrantee, the Department reserves the right to reassign service areas. If it appears necessary to permanently reassign the service area, a new Subgrantee may be chosen in an open, competitive solicitation process in accordance with 10 CFR §440.15 or the reassignment may become permanent.

**Client Education**

The Department requires WAP Subgrantees to provide client education to each WAP client. Subgrantees are required to provide (at a minimum) educational materials in verbal and written format.

**V.8.2 Administrative Expenditure Limits**

The Department will use 5% of its grant funds for state administration. An additional 5% will be distributed for local WAP field operations under contract. Contract funds are intended for local administration, liability insurance coverage, local fiscal audit, materials, labor, program support and health and safety measures. To help ensure that Subgrantees comply with the full and proper use of all the contract funds, written definitions are to be provided to Subgrantees on budget categories as deemed necessary. The Department has elected to provide the maximum allowable funds for Subgrantee administration to Subgrantees receiving less than \$350,000, so it has not included procedures for deciding which Subgrantees will receive additional funds. This decision is based on the following factors:

- Subgrantees often have to rely on other programs for WAP outreach and other administrative support;
- Subgrantees have had to adjust budgeting to keep pace with cost-of-living increases -- staff salaries, fringe benefits, rent, postage, travel, etc.;
- The State of Texas is 877 miles from Northern to Southern tips, 834 miles from Eastern to Western tips, and is comprised of a total of 266,807 square miles. The extra geography that Subgrantees have to cover to serve all the area's clients equitably requires additional staff, staff time, postage and phone costs, and vehicle wear and maintenance. (Source of Mileage Data: Texas Department of Transportation);
- Salaries, space, utilities, telephone, and similar costs associated with program support personnel should be charged to program support; and
- The increasing cost of maintaining appropriate qualified staff is challenging.

For Subgrantees receiving over \$350,000, the administrative allowance will be 5% of each subgrant. For Subgrantees receiving less than \$350,000, the administrative allowance will be 10% of each subgrant.

**V.8.3 Monitoring Activities**

The Department will monitor the Weatherization Assistance Program ("WAP") with the Monitoring staff included in the budget. Subgrantee is defined as an organization with whom the Department contracts and provides WAP funds.

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

Names and credentials of Department staff dedicated to monitoring DOE activities follow. Monitoring staff are paid out of Grantee Administration and the Grantee T&TA (see the Budget Explanation, Personnel line item, for detailed information on the percentages allocated from each budget category.

- Robert Moore - over 8 years of weatherization experience as a Texas WAP Subgrantee, QCI certified, BPI & Lead certified, OSHA30
- Robert Kunz - over 7 years of weatherization experience as a Texas WAP Subgrantee, QCI certified, BPI & Lead certified, OSHA30
- Kevin Glienke – over 6 years of weatherization monitoring experience; BPI Certified; has attended DOE sponsored conferences; QCI certified.

(All staff listed above conduct fiscal/administrative and technical assistance monitoring activities)

Compliance Subrecipient Monitoring is staffed with nine additional monitors not dedicated to weatherization. All of these qualified monitors may be tasked with fiscal and programmatic activities though funds provided by this State plan.

The Department will monitor each of the DOE Subgrantees during the contract period which will be July 1, 2018 through June 30, 2019. Many of the DOE Subgrantees also receive funds through the Department of Health and Human Services Community Service Block Grant and Low Income Home Energy Assistance Program. Whenever possible, all three programs will be monitored during one visit to the Subgrantee.

(See attached PY2018 Tentative Monitoring Schedule)

The Department understands DOE's expectation and will conduct at least one on-site visit annually to each Subrecipient for technical and fiscal/administrative monitoring.

Financial and Administrative monitoring will include, at minimum, a review of the Subgrantee's General Ledgers and policies and procedures (including procurement) as well as support documentation for reported expenditures. These documents will be reviewed to ensure compliance with DOE, Department and other applicable rules and regulations. Through sampled client file monitoring, the Department will ensure that program beneficiaries are eligible low-income families. Through sampled unit inspections, Department staff will ensure that installed measures are allowable and meet or exceed DOE requirements. The Department will review whether charged measures were installed properly and determine compliance with health and safety procedures, client eligibility, energy audit procedures, client education procedures and compliance with the SWS.

The Department will inspect 5% of all completed weatherized units. In order to achieve the 5% inspection rate, and comply with the requirements of WPN 15-4, the Department is requesting that Subgrantees with a QCI on staff do not have that staff member involved with the weatherized unit prior to final inspection. The Department defines prior involvement as performing the audit, creating the work order or performing any weatherization work on the weatherized unit. The Department has created a QCI Final Inspection Form, for Subgrantees which will allow TDHCA to determine if a QCI employed by the Subgrantee had prior involvement with that unit. The Department will review each sampled QCI final inspection document to ensure compliance with the requirement to inspect 5% and will increase the required inspections if necessary.

The Department recognizes that there may be a need to perform additional unit inspections towards the end of the contract period to comply with the requirements of WPN 15-4 if there were not enough units available to sample during the full monitoring review.

(More frequent monitoring visits (Fiscal/Administrative and/or Technical) may be conducted at Subgrantees with significant identified risk)

Monitors will complete evaluation instruments to determine a Subgrantee's compliance. The instruments cover Financial and Administrative requirements, health and safety procedures, client eligibility, energy audit procedures, client education procedures, and compliance with the SWS. Compliance Monitors also review the hard copy of the NEAT or MHEA audit which is required to be in the client file to assure that the scope of the work was directed by the audit.

Monitors scan documents as support if there will be findings noted.

The following list provides additional monitoring details that may occur during the monitoring review.

- Monitors may request copies of fiscal records/support documentation and perform a desk review to gauge the fiscal condition of the Subgrantee prior to onsite monitoring.
- In addition, as needed, monitors may perform a desk review of records requested but not provided during the onsite review and records requested to clarify issues identified during the onsite monitoring visit. The Department recognizes the requirement to issue monitoring letter within 30 days of the review. The Department does not consider the review complete until receipt of information needed to ascertain compliance. Monitoring letters will be issued within 30 days of receipt of all necessary information.

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

The Department will issue monitoring reports within 30 days of completion of the review. Subgrantees are provided a 30 day corrective action period to respond and provide evidence of correction. On a case by case basis, the Department may grant an extension to respond to the report if there is good cause and the request is made during the corrective action period. The Department will review each response and determine if the Subgrantee has resolved the compliance issue. If the Department determines that the issue is not resolved, the Subgrantee will be notified and required to submit an additional response(s) until the compliance issue is resolved. In certain circumstances, the Department may “close” a compliance issue when there remain no additional actions that can be taken to resolve the issue. At the conclusion of this process, any unresolved compliance issues will be reported to DOE (instances of suspected fraud or serious program abuse will be reported immediately to DOE and the Texas State Auditors Office).

The Department will review the annual financial audits of each Subgrantee agency. The Department requires each Subgrantee to complete an Audit Certification form within 60 days of the end of the entity’s fiscal year. This is used to determine if a Single Audit is required. All single audits and management letters must be uploaded to the Federal Clearinghouse within nine months of the Subgrantee’s fiscal year end. Upon receipt of the Single Audit, a review is completed to determine if the packet submitted is complete and all opinions are provided. If the audit contains findings, they are reviewed and discussed by the Director of Internal Audit, the Chief of Compliance and staff to determine the appropriate steps to ensure the entity corrects the issues identified in the audit report or management letter. The Department issues correspondence to the entity, identifying that corrective action measures must be performed and requiring that support documentation be provided. The entity is provided a time frame to complete the corrective action and to respond to the correspondence. The entity must correct all identified issues within six months of the Single Audit being submitted to the Federal Clearinghouse.

The Department’s Compliance Monitor(s) keep abreast of the required timeframe for the entity to complete the corrective action and to provide the response. When the response is received, the Department reviews the documentation to determine if the corrective action requirements have been met. If the issues have not been corrected, the Compliance Monitor and/or Compliance Subrecipient Monitoring Director will notify the Chief of Compliance. The Chief of Compliance may determine if the matter should be referred to the Department’s Enforcement Committee in accordance with Department Rules and standard operating procedures. During the next monitoring visit to the entity, the Department will determine if the selection of expenditures or materials reviewed reflect compliance with the respective requirement.

1. Program Oriented Management Training – Prior to continuing any weatherization-related program activity, all Subgrantee staff that perform any action related to the WAP will be required to complete Program Oriented Management Training ("POM"). POM will include:

- A. Review of WAP statutes and rules
- B. Review of state program requirements
- C. Review of financial and administrative best practices
- D. Review of program best practices

2. Intensive Training and Technical Assistance – Once POM is completed, Subgrantee staff will receive training on critical program components. At each stage of Intensive T&TA, TDHCA team members will provide one-on-one guidance to Subgrantee staff to ensure the correct completion of each component. At the end of Intensive T&TA, Subgrantee staff will have completed another step toward completion a weatherized unit.

- A. Client file documentation
- B. Payment and reimbursement documentation
- C. Accompanied unit assessment
- D. Accompanied Audit completion
- E. Accompanied Interim construction walk-through
- F. Accompanied Final inspection

3. Staged Program Operation – When Subgrantee staff has completed Intensive T&TA, the Subgrantee will complete a pre-determined number of client intakes. Once the client intakes are completed, TDHCA team members will review the ensuing steps of the weatherization process in the following steps:

- A. Review of the client file documentation
- B. Review of unit assessments
- C. Review of audit input and completion to work order

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

D. Accompanied final inspection

Once the Subgrantee has completed the determined number of units and the units have passed TDHCA monitoring, the Subgrantee will resume normal operations for the remainder of the program year. The Subgrantee will be reviewed in April of each year for determination of continued funding.

If it is determined that the Subgrantee is not able to administer the weatherization program, the Department will follow the requirements in 10 TAC §2.202 Contract Closeout.

**V.8.4 Training and Technical Assistance Approach and Activities**

The Department provides Subgrantees with sufficient T&TA funding to obtain and/or maintain required certifications; such as: QCI, MF-QCI, Building Analyst/Energy Auditor, Lead Safe Renovator, Lead Safe Worker, and OSHA 10 or 30. All training provided includes requirements for compliance with QWP specifications. The Department will conduct trainings based upon the following:

- Grant Requirements or as directed by DOE monitor or audit reports.
- Subgrantee Request. The Department has an online request system, with a T&TA menu list, or section for the Subgrantee to make a specific request or ask specific questions. The Department will contact the requestor and customize training to meet the need. <https://tdhca.wufoo.com/forms/request-for-ca-program-assistance>
  - In addition, submitted questions or requests are reviewed for creating FAQs or to identify topics for regional trainings, workshops, or individualized training.
- Monitor Reports. The Department's compliance team shares monitoring issues with the training team. The training team will initially provide resources and guides to address any findings, and follow up with T&TA as required.
  - Trends across the Network will be addressed in regional trainings or workshops.
- Management Request. Management may make a specific request and dictate the type of training needed.

**Tier 1 Training:**

Tier 1 training will be provided by accredited IREC training providers. Tier 1 Training will continue along with ongoing training to maintain skills and certifications. When federal requirements dictate Energy Auditor (EA) certifications they will be required. The Department will be requiring all Subgrantees to ensure their contractors receive other Tier 1 trainings, as needed. Each subcontractor for whom DOE funds are used to provide training for the certification, will be required to enter into a retention agreement with the Subgrantee.

The Department has four certified QCI staff who monitor and/or train weatherization Subgrantees on quality weatherization work, proper diagnostics, documentation, and compliance. The Department has a certified BPI Proctor who administers exams for QCI and MF-QCI. The Department continues to provide T&TA to assist Subgrantees in preparing for and obtaining required certifications. The Department created an online Web-page dedicated to Quality Work Plan requirements that contains guidance and resources. <http://www.tdhca.state.tx.us/community-affairs/wap/quality-work-plan.htm>

In 2017, the Department provided a Mobile Home Insulation course by Cal Steiner, via a regional series. Department T&TA staff provided a Management course, using a Learning Communities format that covered: production, procurement, cost allocation contractors, SWS, documentation, inventory, assessments, QCI, and required diagnostics.

NOTE: New Mexico Energy Smart Academy recently partnered with a local Subrecipient to provide IREC certified courses in Texas including MFQCI and Energy Auditor.

**Tier 2 Training:**

Tier 2 training will be provided by Department training and technical assistance staff or its designee. With experience as Program Officers and Trainers, the staff has experience in Subgrantee monitoring, unit assessments, audits, materials installation, inspections, and the training and technical assistance that support each. The staff consists of:

- Laura Saintey – 10+ years experience in the construction industry and 6+ years experience in the WAP. Certified QCI, LeadSafe Renovator, OSHA 10, BPI Building Analyst Professional, BPI Certified Proctor, and attended DOE sponsored conferences.
- Jason Gagne- 2+ year experience in the WAP, BPI Building Analyst, Lead certified, OSHA 10, and attended DOE sponsored conferences.
- Kevin Glienke- 7+ years in weatherization monitoring and training, BPI certified, QCI, MF-QCI, and attended DOE sponsored conferences.
- Robert Moore- 8+ years of weatherization experience as a Texas WAP Subgrantee, QCI certified, BPI & Lead certified, OSHA 30 and attended DOE

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

sponsored conferences.

- Robert Kunz- 7+ years of weatherization experience as a Texas WAP Subgrantee, QCI certified, BPI & Lead certified, OSHA 30 and attended DOE sponsored conferences.

In 2017, T&TA staff provided regional training to weatherization staff across the Network on proper diagnostics, Mobile Home Insulation and Weatherization Management training.

QCI testing was performed by the Department's BPI proctor.

**Training Schedule 2018:**

Quarterly Phone Calls. Agendas will be evaluated for topics based upon need and identified areas of concern. Topics may include:

- Program Ramp-Up
- Production Schedules
- Upcoming training dates
- Relevant topics for the quarter
- Topics identified by compliance
- FAQs needing clarification
- Closeout and Reporting

Dates for Network Calls:

- April 2018
- July 2018
- October 2018
- January 2019
- April 2019
- July 2019

Online trainings opportunities are passed onto the Network via the state association e-newsletter, along with other notifications regarding outside conferences or workshops.

The Department has posted a link to the Energy Audit tutorial on the Department's website. Training staff will provide technical assistance on a one on one basis if necessary.

The Department is planning a Regional Series, hosted across the state, which will address the top three identified topics. For 2018, the Department has chosen to focus on the following:

- Quality Work: In-process inspections
- Procuring for contractors
- Continued emphasis on final QCIs

Regional Training locations:

- Austin
- Dallas
- Houston
- San Antonio
- El Paso

Subgrantees are required to submit a Production report on the 15th of each month. Individualized TA is provided, as indicated each month, to ensure full expenditure. The Department reinstated the DeObligation/ReObligation of Awarded Funds rule, in 2016, as laid out in TAC §6.405. Letters are issued for any missed benchmarks, and the Subgrantee is required to submit a written Mitigation Action Plan. The Department reports increased performance and expenditures in 2016, and continues to project improvement for 2017. Based upon monthly submitted performance and expenditures, the Department will identify Subgrantees in need of financial management control training or technical assistance. Such T&TA may include: a course on production oriented management, proper reporting, procurement, and/or other appropriate topics.

**U.S. Department of Energy**  
**WEATHERIZATION ASSISTANCE PROGRAM (WAP)**  
**STATE PLAN/MASTER FILE WORKSHEET**

**(Grant Number: EE0007952, State: TX, Program Year: 2018)**

**Evaluation of Training Activities**

In order to evaluate compliance with the quality work specifications and the efficacy of its training activities, the training staff or its designee will review its training activities semiannually and compare those to the Subgrantee monitoring reports. Additionally, Subgrantees will be given the opportunity to provide feedback through online [Training Evaluation](#). These evaluations are reviewed to make improvements to future provided T&TA. Training staff or its designee will conduct periodic surveys to solicit input from Subgrantees as to their training needs.

More specific training will be designed for each Agency based on the information prompting the request. TA will be documented by using the online training and technical assistance database. Additionally, for onsite T&TA visits, a report will be produced indicating Subgrantee staff present, materials and documents presented to the Subgrantee, and expected outcomes.

Should a Subgrantee hire a new weatherization coordinator, the Subgrantee will be required to notify the Department in writing within 30 days of the date of hiring the coordinator and request training. The Department will contact Subgrantees within 30 days of the date of notification to arrange for training. The Department hosts a quarterly "New Manager/Executive Director" course for all new staff who oversees WAP staff/crews

**Program Evaluation**

The Department utilizes an online contract system to collect expenditure and performance data from Subgrantees. Each Subgrantee is assigned to a trainer that monitors Subgrantee performance and expenditure on a quarterly basis utilizing dashboards. The Department developed a production tool to monitor expenditure and completed units on a monthly basis. Each month Subgrantees submit a monthly production report that is reviewed by a trainer. Trainer contacts Subgrantees regarding expenditure and performance each month.

Another method of evaluation is provided by the compliance division. The Department's compliance staff provides the Subgrantees assigned trainer with a copy of the agency's most recent monitor report, which is used to assess performance/expenditures and individualized training needs.

**Client Education**

The Department requires WAP Subgrantees to provide client education to each WAP client. Subgrantees are required to provide (at a minimum) educational materials in verbal and written format. Client education may include temperature strips that indicate the temperature in the room and energy savings materials, instructions for equipment operation and/or maintenance.

**V.9 Energy Crisis and Disaster Plan**

n/a



# WEATHERIZATION HEALTH AND SAFETY PLAN

## TEXAS WEATHERIZATION CONTACT INFORMATION

Michael DeYoung  
Director of Community Affairs  
221 E. 11<sup>th</sup> Street  
Austin, TX 78701  
512-475-2125  
[michael.deyoung@tdhca.state.tx.us](mailto:michael.deyoung@tdhca.state.tx.us)



**Contents**

Health and Safety..... 3

Referrals and Deferrals..... 4

Home Assessment & Client Evaluation ..... 4

Client Education ..... 5

Occupant Pre-existing or Potential Health Conditions..... 5

Health & Safety Issues ..... 5

Air Conditioning and Heating Safety ..... 6

Appliances and Water Heaters..... 6

Asbestos..... 6

Biologicals and Unsanitary Conditions – odors, mustiness, bacteria, viruses, raw sewage, rotting wood, etc..... 7

Building Structure and Roofing..... 8

Code Compliance ..... 8

Combustion Gases ..... 8

Drainage – gutters, down spouts, extensions, flashing, sump pumps, landscapes, etc. .... 9

Electrical (Other than Knob-and Tube Wiring) ..... 9

Electrical (Knob-and Tube Wiring) ..... 10

Fire Hazards..... 10

Formaldehyde, Volatile Organic Compounds (VOCs) and other Air Pollutants ..... 10

Injury Prevention of Occupants and Weatherization Workers – Measures such as repairing stairs and replacing handrails..... 11

Lead Based Paint ..... 11

Mold and Moisture..... 12

Occupational Safety and Health Administration (OSHA) and Crew Safety ..... 13

Pests ..... 14

Radon..... 14

Refrigerant ..... 15

Smoke, Carbon Monoxide Alarms, and Fire Extinguishers ..... 15

Solid Fuel Heating (Wood Stoves, etc.)..... 16

Space Heaters, Stand Alone Electric ..... 16

Space Heaters, Unvented Combustion ..... 17

Space Heaters, Vented Combustion..... 17

Spray Polyurethane Foam (SPF)..... 18

Ventilation ..... 18

Window and Door Replacement, Window Guards..... 19

## Health and Safety

Allowable Department of Energy (DOE) related health and safety (H&S) actions and expenditures are those necessary to maintain the physical well-being of both the occupants and/or weatherization workers where:

- Costs are reasonable as determined by The Department of Energy (DOE) in accordance with this approved Master Plan;
- The actions must be taken to effectively perform weatherization; or
- The actions are necessary as a result of weatherization work.

This plan will provide guidance to the Texas Weatherization Network. Health and Safety issues will be identified by Program Assessors during the initial assessment. Weatherization Crews (either subcontracted or in house) will perform the task(s) identified in the initial assessment and listed in the work order(s).

Weatherization agencies and their representatives, including subcontractors, are required to take all reasonable precautions against performing work on homes that will subject the occupants or themselves to health and/or safety risks. In cases where an occupant's health is fragile, or an occupant has been identified to have a health condition, including allergies, and/or the crew work activities would themselves constitute a health and/or safety hazard, the occupant(s) at risk shall be required to leave during the performance of the work activities. In cases where an occupant is identified as having an allergy to a specific weatherization material, that material will not be installed. If comparable alternative materials are available and the occupant has no known allergies to the alternative materials and they meet DOE regulations, crews/contractors may substitute the alternative material(s). If no safe alternative material meeting DOE standards is available, the measure shall not be installed. This must be well documented in the client file.

Texas exercises the option to budget health and safety costs separately. NOTE: DOE calculates Health and Safety for the State of Texas as 25% of the program operations budget. Texas calculates Health and Safety as a percentage of house dollars (materials + labor + program support + health and safety). The calculation (house dollars x 20%) yields a Health and Safety amount that meets the maximum of 20% for Texas Subgrantees.

For Subgrantees, Health and Safety expenditures may not exceed 20% of total expenditures (materials, labor, program support, and health and safety) at the end of the contract period. H&S expenditures exceeding this percentage will require justification by the Subgrantee.

The Department feels that the 20% H&S amount is justified based on several factors:

1. ASHRAE 62.2 2016 has been adopted and implemented; accounting for an average of \$750/unit, or 15% of the H&S budget.
2. The Department has included Air Conditioning Units as a Health and Safety Measure.

Best Practice:

- [Health & Safety Expenditures](#)

## Referrals and Deferrals

Deferral may be necessary if health and safety issues cannot be adequately addressed according to WPN 17-7 guidance. The decision to defer work in a dwelling is difficult but necessary in some cases. This does not mean that assistance will never be available, but that work must be postponed until the problems can be resolved and/or alternative sources of help are found. Referrals to other resources that may assist in remediation of the cause for deferral are to be provided to the client, and documented in the client file.

A dwelling unit should not be weatherized where there is a major code violation or where there is a potentially harmful situation that may adversely affect the occupants or agency's weatherization crew and/or other staff. When such issues are found to be present, the owner/occupant is notified verbally and in writing; and, only after the owner corrects the identified issues satisfactorily and to code, shall any weatherization work begin. The crew must declare their intent to defer weatherization work on an eligible unit on the energy audit worksheet. The audit form shall include the client's name and address, dates of the audit/assessment, date the client was informed, a clear description of the issue(s), a clear description of the condition(s) under which weatherization work could begin/continue, a clear description of the responsibilities of all parties involved, client's signature(s) indicating that they have been informed of their rights and options and that they understand the issues and their responsibilities. A copy shall be given to the client and a copy shall be placed in the client file.

10 TAC

- [RULE §6.415](#)

Best Practice:

- [Client Denials & Referrals](#)

## Home Assessment & Client Evaluation

Texas has developed a Health & Safety Questionnaire that will be used as part of the application process that will then be further verified by the assessor at the time of the initial assessment.

Forms:

- [Health & Safety Client Questionnaire and Inspection Checklist](#)

Due to Texas' high humidity levels in much of the state, moisture and mold-like substances are an integral part of assessments.

Forms:

[Mold-Like Substance Notification and Release Form for Texas Weatherization Programs](#)  
[Identification of a Mold-Like Substance](#)  
[Unified Notification Form](#)

Best Practice:

[Mold Safe Process](#)

## Client Education

Subgrantees must take every opportunity to educate clients regarding the use and maintenance of systems in their home as well as inform them (through discussion and written materials) of the presence of any hazards including but not limited to: asbestos; biologicals; unsanitary conditions; combustion gases; building structure; roofing; code compliance; electrical; fire hazards; Volatile Organic Compounds (VOCs) and other air pollutants; mold, lead paint; pests; radon; smoke and carbon monoxide detectors; Spray Polyurethane Foam (if applicable); space heaters; and ventilation. Documentation of client education must be present in the client file, via the following documents:

- Client Health and Safety Evaluation Form;
- Initial Assessment documentation of health and safety issue(s), instructions for remediation or referral made;
- Weatherization Assistance Program Denial/Deferral Letter and Right to Appeal; or
- Operating instructions, maintenance, and/or warranty for any installed H&S measure.

## Occupant Pre-existing or Potential Health Conditions

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

When a person's health may be at risk and/or the work activities could create an H&S hazard, the at risk occupant will be required to take appropriate action based on the severity of the risk.

Temporary relocation of at-risk occupants may be allowed. Failure or inability to take appropriate actions will result in a deferral.

Forms:

- [H&S Client Questionnaire](#)

Education Material:

- [Consumer Mold Information Sheet](#)

## Health & Safety Issues

As potential hazards are identified by the initial inspector and auditor, they are analyzed in terms of their severity and how they will be dealt with, up to and including deferral. Wherever possible, measures should be considered through the cost justification method of the saving to investment ratio (SIR) at 1 or greater as an Energy Conservation Measure (ECM) before using funds from the H&S allocation. Clients must always be informed of any Health or Safety risk discovered during the evaluation process in writing and written confirmation of receipt of that information by the client must be obtained and kept in the client file. A listing of H&S issues is compiled, any of which that can't be corrected can result in a deferral on any given project. They are as follows:

## Air Conditioning and Heating Safety

“Red tagged”, inoperable, or nonexistent HVAC system replacement, repair, or installation is allowed due to extreme climate conditions in Texas.

If the HVAC system issue is determined to be beyond the scope of DOE WAP, weatherization agencies will defer the work and refer the client to other resource agencies who may be able to address the problem. Texas’ deferral policy and protocols shall always be strictly adhered to when deferring weatherization work. If client is completely without cooling or heating, the weatherization agencies shall make a referral to an agency with funding that can provide at-risk clients with a portable air conditioner or temporary means of heat, such as a portable heat pump or blankets.

Texas is a diverse state with a myriad of climatic conditions. In many areas, heating is needed on a limited basis. However, throughout Texas, cooling is often a necessity.

Texas requires HVAC system installation to follow local and state code and it must be performed by a licensed HVAC professional. Weatherization agencies may subcontract licensed HVAC companies/individuals to perform heating/cooling systems installations and repairs if they follow proper state procurement procedures.

## Appliances and Water Heaters

Replacement or repair of water heaters is allowed on a case by case basis. Replacement and installation of other appliances are not allowable health and safety costs. Repair and cleaning are allowed. The Subgrantees must initially attempt to qualify existing Water Heater as an ECM. If the Water Heater does not rank, Subgrantees may repair or replace the existing unit as a Health and Safety Measure.

Replacement of cook stoves may be done with unrestricted funds from a funding source other than DOE. Repair and cleaning are allowed. Clients shall be given all manufacturers information on the appropriate use and maintenance of water heating units.

### **Cook Stoves with high CO:**

- Clean or repair.
- If still has high CO levels, then see if another funding source is able to pay for the stove replacement.
- If no other source, the house must be deferred until the occupant can address the stove.
- Document all steps.
- Houses with stoves with CO levels of 200 ppm or higher which cannot be remedied must be deferred. The money spent trying to fix it, unsuccessfully, would be charged to Program Support.

## Asbestos

Removal of siding is allowed to perform energy conservation measures. All precautions must be taken not to damage siding. Asbestos siding should never be cut or drilled. It is recommended, where possible, to insulate through home interior to avoid disturbing or removing the asbestos siding on the exterior of the home.

It is difficult to tell whether a material contains asbestos simply by looking at it, unless it is labeled. If in doubt, treat the material as if it contains asbestos. Testing is allowed by a certified AHERA tester.

Inspect exterior wall surfaces and sub-surfaces for asbestos siding prior to drilling or cutting. Typically, asbestos appears as a whitish, fibrous material which may release fibers that range in texture from coarse to silky.

It is recommended that insulation be installed through interior wall surfaces if possible.

Inspect pipe and other coverings for asbestos. Encapsulation is allowed by an AHERA asbestos control professional and should be conducted prior to any blower door testing. Removal may also be allowed by an AHERA asbestos control professional based on the situation as determined by the inspector or Agency Representative.

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. Where blower door tests are performed, it is a best practice to perform pressurization instead of depressurization. Encapsulation by an appropriately trained asbestos control professional shall be allowed. Removal shall not be allowed.

Temporary removal of asbestos siding, so that insulation materials may be installed, may be performed if:

- Technicians wear personal protective equipment;
- The ground in the work area is covered with plastic sheeting to capture broken fragments;
- The pieces of siding to be removed are first sprayed with water;
- Breakage is kept to an absolute minimum;
- The siding is replaced; and
- The cost to benefit ratio is justified.

Do not dust, sweep, or vacuum debris that may contain asbestos. Never saw, sand, scrape, or drill holes in asbestos materials. Do not track material that could contain asbestos through the house. Be sure to follow local codes and OSHA standards on asbestos at the following hyperlink:

[Asbestos](#)

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

Remediation of conditions that may lead to or promote biological concerns and unsanitary conditions is allowed. Addressing bacteria and viruses is not an allowable cost. Deferral may be necessary in cases where a known agent is present in the home that may create a serious risk to occupants or weatherization workers.

A sensory inspection is required. The use of personal protective equipment shall be strictly enforced. Respirators, protective eyewear, and protective clothing will be worn when there is suspicion or knowledge that biological agents may be present in order to eliminate or minimize crew exposure.

In the past, remediation of conditions listed under this health and safety category was not allowed. It is allowable under WPN 17-7, except for the removal of known bacteria and viruses. Texas will assess the cost effectiveness and necessity of remediation of these conditions on a case by case basis.

Client must be informed of observed conditions. Clients must be provided information and explanation on how to maintain a sanitary home and steps to correct deferral conditions, if applicable.

## Building Structure and Roofing

Building rehabilitation is beyond the scope of the WAP. Homes with conditions that require more than incidental repair should be deferred.

While conducting the initial audit, the building structure shall be inspected for structural integrity. Minor repairs to protect the DOE materials installed may be performed to protect the energy saving investment. Dwellings whose structural integrity is in question should be referred to agencies that deliver HUD funds or other appropriate local and state agencies. Weatherization services may need to be delayed or deferred until the dwelling can be made safe for crews/contractors and occupants. Incidental (minor) repairs necessary to effectively perform or preserve weatherization materials/measures are allowed. Examples of these include sealing minor roof leaks to preserve new attic insulation and repairing water-damaged flooring as part of replacing a water heater. Incidental structural repairs shall not include cosmetic applications, such as replacing a floor covering such as a carpet or linoleum. Only the structural part shall be replaced/repaired.

## Code Compliance

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.

WAP funds may be used when weatherization measures are being conducted. They may not be used simply to correct pre-existing code compliance issues.

Acquire all required permits and licenses pertinent to installing weatherization measures. These vary by jurisdiction and it is the responsibility of each Subgrantee agency to know what the codes are in each of the areas they work, as well as what permits and licenses are required in each of the areas they work.

## Combustion Gases

Proper venting to the outside for combustion appliances, including gas dryers, is required. Correction of venting is allowed when testing indicates a problem.

A complete mechanical systems assessment is required to be completed on every home. The procedure includes collecting general information; collecting and recording mechanical systems information; visual and diagnostic inspection of the venting and distribution system; and, combustion analysis and diagnostic testing of gas/propane fired equipment, and post-installation safety tests for CO. Combustion safety testing is required when combustion appliances are present. Pre and post combustion appliance safety inspections include all of the following: carbon monoxide testing, draft measurement, spillage evaluation,

and worst case depressurization of the combustion appliance zone (CAZ).

As applicable, every combustion appliance will be checked for a safe flue pipe, chimney or vent, adequate combustion air, and gas leakage. DOE will not permit any DOE-funded weatherization work where the dwelling unit is heated with an unvented gas- and/or liquid-fueled space heater as the primary heat source. In such cases the primary space heater must be removed and a vented code compliant heat source must be installed prior to the installation of weatherization measures. DOE will allow unvented gas- or liquid-fueled space heaters to remain as secondary heat sources provided they comply with ANSI Z21.11.2, the IRC, and the IFGC. LIHEAP-WAP may replace non-compliant secondary unvented gas- or liquid-fueled space heaters.

Per ASHRAE 62.2, at least one CO alarm must be present in every home. CO alarms must be installed in all homes with combustion appliances; combustion appliances include: cook stoves, furnaces, water heaters, wood and coal burning stoves. Combustion appliances must be installed to the IRC or local code regulations.

10 TAC:

- [RULE §6.415](#) CO Action Levels

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

Best Practice:

- [Combustion Appliance Zone \(CAZ\) Testing](#)
- [Isolating the Combustion Appliance Zone \(CAZ\)](#)

## **Drainage – gutters, down spouts, extensions, flashing, sump pumps, landscapes, etc.**

Major drainage issues are beyond the scope of the WAP. Homes with conditions that may create a serious health concern that requires more than incidental repairs should be deferred. See Mold and Moisture guidance below.

Visual inspection and observation shall be the primary mechanism for detecting drainage issues. Client education shall include, but not be limited to, the importance of cleaning and maintaining drainage.

## **Electrical (Other than Knob-and Tube Wiring)**

Minor electrical repairs are allowed where health or safety of the occupant(s) may be at risk. Upgrades and repairs are allowed when necessary to perform specific weatherization measures.

Aluminum wiring should be thoroughly inspected before any insulation work is done. If aluminum wiring is found to be active and in the areas to be insulated, no insulation should be added. When electrical repairs within the scope of the DOE WAP are required, the typical standard of remedy shall be to sub-contract the repair work to a licensed electrician. All appropriate procurement procedures shall be followed when sub-contracting. Testing shall include visual inspection, as well as voltage drop and voltage



detection testing. Provide client information on overloading circuits and electrical safety and risks.

## Electrical (Knob-and Tube Wiring)

Minor upgrades and repairs necessary for weatherization measures and where the health or safety of the occupant(s) is at risk may be allowed. However, TDHCA prohibits installing insulation over knob-and-tube wiring.

Prior to insulating around Knob and Tube wiring, cost effectiveness must be evaluated and barriers must be installed to keep insulation at least three inches from the K&T.

Best Practice:

- [Knob & Tube Wiring](#)

## Fire Hazards

Correction of fire hazards is allowed when necessary to safely perform weatherization.

At all times, crews/contractors are to look for potential fire hazards.

Crews/contractors and auditors shall check for potential fire hazards in the home during the audit and while performing the weatherization work. Fire hazards must be remedied if they fall within the scope of the DOE WAP; otherwise weatherization work may have to be deferred until the fire hazard has been eliminated.

Clients must be notified of any identified fire hazards and noted in client file.

Health and Safety Guidance:

- [Potential Fire Hazards in a Home \(PDF\)](#)

## Formaldehyde, Volatile Organic Compounds (VOCs) and other Air Pollutants

WAP workers may not remove pollutants. Removal of pollutants must be done by the client or a contracted professional prior to weatherization work being performed. If pollutants pose a risk to workers and removal cannot be performed by a professional or the client refuses to remove the pollutants, the unit must be deferred.

Sensory inspection shall be the primary detection method. All reasonable steps shall be taken to limit worker exposure to VOCs. When using products known to emit VOCs, increase ventilation. Meet or exceed any label precautions. Identify, and if possible, remove the source. If not possible to remove, reduce exposure by using a sealant on all exposed surfaces of paneling and other furnishing. State and local codes and regulations regarding disposal of toxic household wastes must be followed. Texas WAP crews/contractors shall take every precaution necessary to minimize exposure to air pollutants.

When using chemicals and products that may contain any of the pollutants within this category, strict adherence to label instructions and precautions shall be required. Known pollutants must be removed by the client or a contracted professional prior to performance of weatherization work.

Clients must be informed of any conditions and/or associated risks observed. Client must be given written information on safety and proper disposal of household pollutants, if applicable.

Health and Safety Guidance

- [EPA Guidance on Common Household Wastes & Materials](#)
- [Indoor Air Quality](#)

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

Workers must take all reasonable precautions against performing work on homes that will subject workers or occupants to health and safety risks. Porch or stair repairs that would be required to make a home safe for weatherization workers are not an allowable measure in the program. Such situations are considered to be beyond the scope of Texas WAP.

As part of the safety for crew, assessors will identify health and safety hazards according to the OSHA method “Focus Four” which includes, electrical, fall protection, caught in and between, and struck-by hazards. The client will be informed in writing of any hazards and the associated risks that may have been observed.

Health and Safety Guidance

- [OSHA Focus Four](#)

## **Lead Based Paint**

Weatherization requires all weatherization crews/contractors working in pre-1978 housing to be trained in Lead Safe Weatherization (LSW) and follow EPA’s Lead; Renovation, Repair and Painting Program (RRP) rule. Deferral is required when the extent and condition of lead-based paint in the house would potentially create further health and safety hazards.

In all pre-1978 homes, crews/contractors must assess the physical condition of the home prior to conducting an audit. Texas recommends assuming that lead paint may be present in any house built prior to 1978 and to follow the proper DOE LSW protocols, OSHA regulations and EPA regulations in all pre-1978 homes. Mobile homes are exempt because lead was not used in the original manufacture of mobile homes. However, crews/contractors must be alert to any mobile home remodels/add-ons that could have contained lead-based paint or varnish.

Testing is allowed per RRP requirements. Job site set up and cleaning verification is required by a Certified Renovator. Texas WAP crews/contractors will use LSW work practices that decrease the amount of dust generated.

Texas will follow the approach that has been defined by the Environmental Protection Agency (EPA) under their Lead Renovation, Repair, and Painting Rule.

All Subgrantees are required to provide a copy of “Renovate Right: Important Lead Hazard Information for

Families, Child Care Providers and Schools” to an adult occupant prior to work starting on the home. Texas WAP crews/contractors will follow all EPA RRP requirements for disposal as well as state and local code requirements. This procedure is documented by a written acknowledgement that the adult occupant has received the brochure and that the information was not only distributed, but also explained, or certify in writing that a brochure had been delivered to an adult occupant and the provider has been unsuccessful in obtaining a written acknowledgement, as directed in the publication. Confirmation of receipt of this brochure by the client will be maintained in the client file.

***Digital photo documentation must also be included. Even when a home tests negative for lead, the test form must be completed and placed in the client file.***

State policy mandates all workers on site on any weatherization project, whether they be a crew based employee of one of the sub-contractors or a private sector contractor, must complete an eight (8) hour Lead Safe Worker Practices Workshop.

Each Subgrantee must be an EPA Certified Firm and have a Certified Lead Renovator on staff. The Subgrantee is responsible to obtain and maintain the required certifications.

Best Practice:

- [Lead-safe Process and RRP Requirement](#)

WX Videos

- [12 Steps to Lead Safety](#)
- [Health & Safety Series: Respirators & Personal Protective Equipment](#)

Health and Safety Guidance

- [Lead; Renovation, Repair, and Painting Program; Lead Hazard Information;](#)
- [Renovate Right](#)

## **Mold and Moisture**

Limited water damage repairs can be addressed by weatherization workers. Correction of moisture and mold creating conditions are allowed when necessary in order to weatherize the home and to ensure the long term stability and durability of the measures. Where severe mold-like substance and moisture issues cannot be addressed, deferral is required.

Visual assessment is required and diagnostics such as moisture meters are recommended pre-assessment and prior to final inspection. The assessment shall assure existing mold-like conditions are noted, documented and disclosed to the client; and, shall assure existing building envelope conditions do not contribute to mold-like growth when weatherization measures are applied. Mold-like substance assessment means a visual assessment combined with certain allowable diagnostics. It does not mean testing for mold. **DOE funds may not be used to test for mold-like substances.**

Texas WAP crews/contractors shall follow the Mold/Moisture Assessment Checklist when conducting the mold-like substances assessment at the time of the audit. Assessment shall include a general examination of the building, to include:

- Examine structure, maintenance activities, occupancy patterns
- Visually look for mold-like substances and water staining
- Look for evidence of standing water
- Look for evidence of condensation
- Check basement or crawl space and attic for proper venting and exhaust

Outdoors:

- Soil grade or drainage toward foundation
- Standing water adjacent to foundation
- Wall and roof damage allowing water intrusion
- Missing or blocked rain gutters
- No downspout extensions
- Firewood stacked adjacent to house
- Excessive shrubbery around foundation

Heating/cooling systems:

- Air intakes: debris (organic) vs. clean air
- Filters: dirty, damp, poor type
- Heat exchangers: dirty & damp coils, condensate pans, drainage, stagnant water
- Ducts: contamination, moisture

Occupied Space:

- Plumbing leaks
- Water stains on walls, ceilings and around windows
- Musty odor
- Surface Condensation (especially during mild weather)
- Mold-like substances on carpeting
- Humidifiers
- Window air conditioners
- Lack of bathroom, kitchen exhaust
- Clothes dryer not vented to outside
- Firewood stored indoors
- Wet clothes drying indoors

The DOE Training Resource:

- [Mold and Moisture](#) given by Michael Vogel of MSU Weatherization Training Center is available to all Subgrantees through TDHCA's website
- [Energy Related Mold and Moisture...awareness and impacts for weatherization](#)

Best Practice:

- [Mold-safe Process](#)

## Occupational Safety and Health Administration (OSHA) and Crew Safety

Workers must follow OSHA standards and Safety Data Sheets (SDS) and take precautions to ensure the

health and safety of themselves and other workers. SDS must be posted wherever workers may be exposed to hazardous materials.

- OSHA 10-hour training for all crew level WAP employees
- OSHA 30-hour training for all crew leaders
  - All OSHA training shall be updated as required and kept current.
  - SDS must be present at the work sites.

On-going Health & Safety training will be the responsibility of each Subgrantee.

FAQs:

- [Weatherization FAQs Answered by TDHCA \(PDF\)](#)

For other Information on obtaining OSHA classes:

- [OSHA Education Center](#)
- [The OSHA Consultation office](#)

## Pests

Pest removal is allowed only where infestation would prevent weatherization or poses a health and safety concern for workers. Infestation of pests may be cause for deferral where it cannot be reasonably removed.

Determine whether the pest infestation would prevent or hamper the weatherization work. If removal is a viable and cost-effective option, take the necessary steps to remove the pest infestation problem so that the weatherization work can proceed. If removal is not a viable and cost-effective option or significant health and safety risks exist, defer the weatherization work and provide client with appropriate referral information.

Inform client of observed pest condition and associated risks and document in client file.

Best Practice:

- [Pests](#)

## Radon

Whenever site conditions permit, exposed dirt must be covered with a vapor barrier except for mobile homes. In homes where radon may be present, precautions should be taken to reduce the likeliness of making radon issues worse.

Texas has no areas of "Highest Potential," according to the United States Environmental Protection Agency standards.

Texas Department of State Health Services

- [Radon](#)

## Refrigerant

Reclaim refrigerant per Clean Air Act of 1990, section 608, as amended by 40 CFR 82, 5/14/93

Texas WAP Subgrantees shall ensure that sub-contractors who would be charged with refrigerant reclamation (e.g. removal of old refrigerators or air conditioning units) follow all EPA testing protocols; in accordance with the Clean Air Act of 1990, section 608, as amended by 40 CFR 82, 5/14/93. Refrigerants shall be pumped into a recovery tank and disposed at an EPA approved site. Clients should not disturb refrigerant.

Non-certified technicians may not attach or disconnect hoses or gauges to measure pressure within the appliances; top-off or remove refrigerant from appliances; or otherwise damage the integrity of the appliance.

EPA

- [Refrigerant Disposal Brochure](#)

## Smoke, Carbon Monoxide Alarms, and Fire Extinguishers

Installation of smoke/CO detectors is allowed where detectors are not present or are inoperable. Replacement of operable smoke/CO detectors is not an allowable cost. Providing fire extinguishers is allowed only when solid fuel (such as wood) is present.

At minimum, all homes should have at least one smoke alarm on each level, including one near the combustion zone and at least one near the bedrooms. Ceiling-mounted smoke alarms must be mounted at least 6 inches from any wall. Wall-mounted smoke alarms must be installed at least 6 but less than 18 inches from the ceilings. They should always be installed according to applicable local codes or ordinances.

Don't install smoke alarms in these cases:

- In a home that already has a functioning smoke alarm
- Within 12 inches of exterior doors and windows
- With an electrical connection to a switched circuit
- With a connection to a ground-fault interrupter circuit (GFCI)

A CO alarm should also be installed in accordance with SWS. CO alarms should be installed in all homes with unvented space heaters (all unvented space heaters must comply with ANSI Z21.11.2) and in all homes where backdrafting could occur in a furnace, space heater, wood stove, fireplace, or water heater. Always install CO alarms according to the manufacturer's instructions.

Don't install CO alarms in these cases:

- In a room that may get too hot or cold for alarm to function properly

- Within 5 feet of a combustion appliance, vent, or chimney
- Within 5 feet of a storage area for vapor-producing chemicals
- Within 12 inches of exterior doors and windows
- Within a furnace closet or room
- With an electrical connection to a switched circuit
- With a connection to a ground-fault interrupter circuit (GFCI)

A fire extinguisher may be provided in homes whose primary heat source is wood. The fire extinguisher must be installed according to manufactures standards and local code in vicinity of the primary heating source.

## **Solid Fuel Heating (Wood Stoves, etc.)**

Maintenance, repair, and replacement of primary indoor heating units is allowed where occupant health and safety is a concern. Maintenance and repair of secondary heating units is allowed.

Crews/contractors may conduct minor maintenance activities where warranted. Chimney inspection, repair and/or replacement work shall be sub-contracted to a qualified solid fuel heating system vendor. This would be a health and safety issue requiring photo documentation and receipt of services by the professional with a description of what services were performed.

If there is a traditional open masonry fireplace, assess that it is operating safely. Unless a wood burning stove/pellet stove has been maintained on a regular basis, along with annual chimney cleanings, it is unlikely that it is efficient and safety must be evaluated. Determine if cleaning is needed to increase efficiency. If it is not operating safely (as evidenced by backdrafting of smoke or complaints of itchy eyes or respiratory issues by the client) determine if repair or replacement with a vented code-compliant heating system is required.

An unsafe, unrepairable open masonry fireplace would be treated similarly to that of an unvented space heater if it is the primary source of heat. The fireplace must be rendered inoperable and replaced with a vented heating unit. The type of existing fuel will dictate the replacement. If the client has a combustion fuel source (i.e. - gas, propane, etc) then seal up the fireplace and add a vented gas heater.

When replacing a wood stove in a mobile/manufactured home the new unit must be listed for use with manufactured homes and must be installed in accordance with their listings. Units that are not manufacturer approved, discovered during an initial assessment, should be replaced with an approved manufactured home appliance, under H&S. All state and local codes must be followed.

Best Practice:

- [Combustion Appliance Zone \(CAZ\) Testing](#)

## **Space Heaters, Stand Alone Electric**

Stand-alone electric heaters are defined as heaters that do not have a permanent connection to electric power and/or stand-alone heaters that have been connected to the power supply against code. Repair,

replacement or installation is not allowed. Removal is recommended.

Testing will be required to assure adequate supply of electricity is available for existing stand alone electric space heaters. This will be accomplished through the use of 3 wire circuit testers, GFI electrical outlet testers, and line voltage testers.

Inform client of hazards if removal is not allowed.

## Space Heaters, Unvented Combustion

Removal is required, except as secondary heat where the unit conforms to ANSI Z21.11.2. Units that do not meet ANSI Z21.11.2 must be removed prior to weatherization but may remain until a replacement heating system is in place.

Testing for air-free carbon monoxide (CO) is to be performed. All units must have an ANSI Z21.11.1 label, and meet IRC and IFGC codes. The client must be informed of the dangers of unvented space heaters – CO, Moisture, and NO<sub>2</sub>. CO can be dangerous even if CO alarm does not sound.

Assessors must calibrate the CO tester outside the home and test the ambient air in the home; following the standards in the Standard Works Specifications:

- Perform an inspection of the heater. Any of the following conditions are grounds for repair or replacement:
  - Carbon monoxide (CO) test indicates ambient CO levels above 35 PPM
  - Bad burners (missing, broken, or otherwise un-repair-able)
  - Cross-fueled (between NG and LPG) and the orifices and/or pressure regulator have not been changed
  - Missing radiants
  - Open flame burners
  - Rubber supply lines
  - Charring or scorching

If cause cannot be determined, calibrate equipment and re-test. If still indeterminable, refer to local gas company. Any time replacement is deemed necessary, first consider performing the replacement as an ECM (energy saving measure) before replacing as a Health & Safety measure.

On-going Health & Safety training will be secured by the Subgrantee.

The Department will provided guidance via Q&As, and postings of FAQs to Department Website. <http://www.tdhca.state.tx.us/community-affairs/wap/guidance.htm>.

## Space Heaters, Vented Combustion

Vented space heaters shall be treated as furnaces. Combustion safety testing is required when combustion appliances are present. Weatherization Assessors and Final Inspectors must conduct the combustion appliance safety inspection. This includes all of the following: carbon monoxide testing, draft measurement, spillage evaluation, worst case depressurization of the combustion appliance zone (CAZ), a



safe flue pipe, chimney or vent, adequate combustion air, and gas leakage as applicable. Combustion safety test results must be acted upon appropriately according to the Standard Work Specifications and BPI protocols.

The Department has defined maximum acceptable CO readings as 200 parts per million for vented combustion appliances. Vented space heaters tested at >200 ppm must be repaired or replaced. CO detectors should be installed in all homes when fuel-fired (combustion) appliances exist.

## Spray Polyurethane Foam (SPF)

Use EPA recommendations while working within the conditioned space when SPF fumes are evident. When working outside the building envelope, isolate the area where foam will be applied, take precautions so that fumes will not transfer to inside conditioned space, and exhaust fumes outside the home. Testing will include checking for penetrations in the building envelope. Sensory inspection inside the home for fumes during foam application must also occur.

The client must be informed of plans to use two-part foam and precautions that may be necessary. Workers using foam products must receive training on the proper use of these various products and understand the specification for each application type. SDS are mandatory for any foam product used and a thorough understanding of the temperature sensitivity of the product in use is required.

EPA

- [Quick Safety Tips for Spray Polyurethane Users](#)

## Ventilation

Ventilation is only required if ASHRAE 62.2 calculations indicate added ventilation. In addition, ASHRAE 62.2 addresses dryer venting, CO alarm, and air sealing to isolate attached garages requirements. Existing fans and blower systems should be updated if not adequate.

Subgrantees are required to use the Alternative Compliance Path for Existing homes and perform an ASHRAE calculation through certified software such as RedCalc. Both the output of the software and a copy of the blower door data sheet must be placed in the client file.

In addition, the ASHRAE standards are incorporated into the Standard Work Specifications

Subgrantees who install ventilation must educate the clients on effective use of the exhaust ventilation equipment by:

1. Leaving owner's manual with client
2. Demonstrating how to use the exhaust fans.
3. Providing client education information on ventilation systems installed.
4. Providing client education on proper operation and maintenance.

Tools and Guides:

- [Exhaust Fan Flow Meter Quick Guide \(PDF\)](#)
- [Single-Family Homes: Standard Work Specifications Field Guide \(PDF\)](#)

Assessment Calculators:

- [ASHRAE 62.2 Calculator \(www.residentialenergydynamics.com\)](http://www.residentialenergydynamics.com)

Client and Assessment Forms:

- [Blower Door and Duct Blower Data Sheet \(XLS\)](#)

## Window and Door Replacement, Window Guards

Replacement, repair, or installation is not an allowable health and safety cost but may be allowed as an efficiency measure if cost justified.

Window replacements may only be performed as an ECM. When working on windows follow LSW requirements for pre-1978 homes.

Best Practice:

- [Window Repair or Replacement](#)
- [Window Repair – LIHEAP](#)
- [Door Repair or Replacement](#)