



# West Virginia Weatherization Assistance Program

State of West Virginia  
Development Office

ANNUAL FILE  
PY 2021



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

**(Grant Number: EE0007958, State: WV, Program Year: 2021)**

**IV.1 Subgrantees**

<b>Subgrantee (City)</b>	<b>Planned Funds/Units</b>
CHANGE, Incorporated (Weirton)	\$194,628.00 20
Coalfield CAP (Williamson)	\$397,703.00 40
Community Action of South Eastern West Virginia (Bluefield)	\$329,786.00 33
Community Resources, Incorporated (Parkersburg)	\$423,383.00 43
Eastern West Virginia Community Action Agency (Moorefield)	\$349,384.00 35
Mountain CAP of West Virginia, Incorporated (Buckhannon)	\$163,541.00 17
MountainHeart Community Services (Oceana)	\$146,647.00 15
Nicholas Community Action Partnership (Summersville)	\$57,442.00 6
North Central West Virginia Community Action Assoc., Inc. (Fairmont)	\$731,543.00 74
PRIDE Community Services (Logan)	\$149,688.00 15
Southwestern Community Action Council (Huntington)	\$435,210.00 45
<b>Total:</b>	<b>\$3,378,955.00</b> <b>343</b>

**IV.2 WAP Production Schedule**

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

Weatherization Plans	Units
Total Units (excluding reweatherized)	343 343
Reweatherized Units	0 0

Average Unit Costs, Units subject to DOE Project Rules

**VEHICLE & EQUIPMENT AVERAGE COST PER DWELLING UNIT (DOE RULES)**

A Total Vehicles & Equipment (\$5,000 or more) Budget	\$0.00
B Total Units Weatherized	343
C Total Units Reweatherized	0
D Total Dwelling Units to be Weatherized and Reweatherized (B + C)	343
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	\$2,663,480.00
G Total Dwelling Units to be Weatherized and Reweatherized (from line D)	343
H Average Program Operations Costs per Unit (F divided by G)	\$7,765.25
I Average Vehicles & Equipment Acquisition Cost per Unit (from line E)	\$0.00
J Total Average Cost per Dwelling (H plus I)	\$7,765.25

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**IV.3 Energy Savings**

Method used to calculate savings: ☒ WAP algorithm ☐ Other (describe below)

	Units	Savings Calculator (MBtus)	Energy Savings
This Year Estimate	343	29.3	10050
Prior Year Estimate	346	29.3	10138
Prior Year Actual	417	29.3	12218

**Method used to calculate savings description:**

The West Virginia Weatherization Assistance Program (WV WAP) will utilize the WAP algorithm to calculate projected energy savings for the purpose of this application. The estimated energy savings for 2021 – 2022 is 10,050 MBtu.

The West Virginia Development Office has implemented a system to estimate annual energy savings for all funding sources as per 440.14(c) (4). The process entails utilizing data from the "Weatherization Assistant Recommended Measures Output Report." In PY 2020 – 2021, the WV WAP was able to collect data to compare/report energy savings data. WVDO will continue to pursue any additional development needed of the database management tool reporting capabilities to utilize the data effectively in the future.

**Energy Savings**

**DOE Program**

	Amount	Line
Total DOE State Weatherization Allocation	\$3,784,308	(a)
Total Cost associated with Administration, T&TA, Financial Audits, and Insurance	\$1,120,828	(b)
Subtract the amount entered in line (b) from line (a), for a total Federal (DOE) funds available to weatherize homes	\$2,663,480	(c)
State Average Cost per Home	\$7,776	(d)
Divide the amount entered on line (c) by the amount entered on line (d), for Total Estimated Homes to be Weatherized	343	(e)
Multiply (e) by 29.3 MBTU for Total Annual Estimated Energy Savings resulting from DOE appropriated funds	10,050	(f)

The PY 2020 – 2021 energy saving calculations uses the most recent Metaevaluation of the National Weatherization Assistance Program (ORNL/CON-493).

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

WV WAP will continue to pursue non-Federal resources to supplement the Program through the development or continuation of leveraging projects and partnerships. The WV WAP expects at least a dollar return for every dollar invested in leveraging project activity. Weatherization leveraging activities in WV WAP since 2002 have consistently and successfully produced a greater number of dollars leveraged than expended every year on leveraging activities.

WVDO will have a staff member that will continue to participate in leveraging activities. For PY 2021 – 2022, WVDO plans to utilize **0.0026 percent (\$9,987)** of the annual formula DOE allocation for leveraging activities.

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Planned activities may include the following objectives as needed to increase the scope of weatherization services to low-income West Virginia households:

- Increased facilitation in the development of utility/WAP projects and partnerships, including supporting representation activities in the West Virginia Public Service Commission if needed for new partnerships. WVDO staff will continue to be involved in technical assistance, planning, and rules development of any negotiated projects or partnerships. Expansion or altering of certain weatherization-utility partnership activity may be negotiated between the utility companies and the local weatherization providers, with WVDO made fully aware of any changes made in this manner, providing input as needed.
- Continued facilitation of the expansion of potential subrecipient leveraging activities by:
  - Assisting subrecipients and West Virginia Community Action Partnership (WVCAP) through the negotiation of partnerships, agreements, and other arrangements;
  - Presentation of arguments and associated activities before state or local agencies, as contained under Section 142 of the Energy Policy Act of 1992 (amended in 2005) and providing training and technical assistance support to WVCAP and subrecipients as part of their active participation in utility rate proceedings and process in West Virginia as applicable; and
  - Continued contact with both the utility industry and the private energy service company network to continuously improve programs.
- Continue to provide support and leadership to subrecipients and WVCAP offering tools and resources to assist in weatherization outreach, possibly including fall Energy Awareness activities. Such potential activities may involve:
  - Support in holding leveraging-related meetings;
  - Preparation of statewide weatherization statistical documents;
  - Preparation of public information/energy efficiency data; and
  - Technical assistance in the organization of weatherization site demonstrations at the local subrecipient level to illustrate program technology for policymakers and other partners.

It is anticipated that continued leveraging activities will enable the WV WAP to enhance and expand comprehensive low-income weatherization services and be viewed as a leader in energy conservation technology and a viable partner in conservation projects.

Listed below are the identified funding sources outside of DOE funding for the WV WAP at this time. However, it is a goal of the WV WAP to continue to pursue funding to support and build upon the weatherization program in the State of West Virginia. This pursuit may include but not be limited to grants, foundation funds, and other non-federal partnerships.

**Current non-DOE Funding Supporting WV WAP**

**Low-Income Home Energy Assistance Program (LIHEAP):** The WV WAP will continue to utilize Low-Income Home Energy Assistance Program (LIHEAP) funds in the operation of the weatherization program. WVDO has worked with the West Virginia Department of Health and Human Resources (DHHR), the LIHEAP Grantee, to identify allowable measures and costs that could be supported by LIHEAP funding outside of DOE regulations and requirements. As per LIHEAP IM 1999-11, Weatherization Grantees "may use some, all or none of the statutory and regulatory provisions that apply to the Department of Energy's Low-Income Weatherization Assistance Program when spending LIHEAP funds on weatherization activities, provided the grantee administers both programs." Therefore, WVDO works with DHHR to construct the LIHEAP agreement to provide more flexibility within the program and the ability to address issues that may not be able to be addressed with DOE funding due to certain restrictions.

Currently, the most notable exceptions of LIHEAP funding are the three (3) Supplemental Components: Electrical Upgrade, Weatherization Related Home Repair, and the Energy Crisis Intervention Program (ECIP) which historically have been approved measures of the Grant Agreement WVDO has with DHHR. DHHR has also approved additional funds for Health and Safety measures through LIHEAP funding. The WVDO monitors subrecipient Health and Safety spending monthly to keep the WV WAP Network from spending excessive funding on Health and Safety related issues.

The WV WAP is again seeking additional LIHEAP funding through DHHR for weatherization services. The WV WAP is proposing that these funds not include all DOE rules and regulations in order to address client issues that are outside the scope of DOE funds. This includes additional Home Repair flexibility in attempts to reduce the deferral rate of the WV WAP by being able to address larger scale repair issues of dwellings to make them eligible to receive weatherization services. Working with DHHR, the WVDO will continue to be diligent to include proper standards for these funds to ensure appropriate quality for measure installation.

**Utility Programs**

Through participation of rate-case energy advocacy intervention activity at the Public Service Commission of West Virginia, the WVCAP worked and advocated for utility-weatherization leveraging partnership initiatives administered by WVDO. These have been continuing partnerships that have not required additional rate case intervention. The current partnerships are as follows:

**Dominion Hope Gas:** The Dominion Hope Targeted Gas Energy Efficiency Program (TGEEP) is also managed in conjunction with the WAP. The intent of the program is to improve the overall efficiency and safety of the heating system by repair or replacement, thereby reducing the energy consumption of the customers served. Currently no other measures are approved as part of the program.



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**AEP dba Appalachian Power Company and Wheeling Power Company (APCO):** The APCO low income weatherization program is a comprehensive utility funded residential energy efficiency program that encompasses all the major areas of the DOE WAP (insulation, air sealing, HVAC, baseload reduction, and limited health and safety measures). The program funding for PY 2020 and PY 2021 was \$796,875. This program, as well as the other non-WAP energy efficiency programs Appalachian Power Co. operates in WV, is evaluated yearly by a third-party contracted by the utility company.

**FirstEnergy Corporation dba Mon Power Company and Potomac Edison Company:** The FirstEnergy family of companies is headquartered in Akron, Ohio, and in West Virginia utilizes Potomac Edison Company for the service area in the eastern panhandle, and the Mon Power Company in the north-central service area of the state.

- **FirstEnergy EEP:** FirstEnergy Electric Efficiency Partnership: The program focuses on measures that will impact the consumption of electricity in the homes of WAP clients that are electric customers of FirstEnergy Corporation in West Virginia. The program reimburses for costs of electric heating systems up to \$500, 50% of costs of electric water heaters, 50% of air sealing and insulation costs, and 100% of cost of various baseload measures.
- **TrAILCo EEP+:** The Trans-Allegheny Interstate Line Company (TrAILCo) Electric Efficiency Partnership provide funds to the two West Virginia WAP Community Action Agency (CAA) subrecipients serving FirstEnergy customers in the six-county area through which the TRAILCo corridor passes. The program operates to supplement the DOE WAP funds to provide customers a more comprehensive and aggressive focus on baseload energy usage and energy efficiency measures than is defined and permitted by the DOE WAP. The TrAILCo program further invests in long range lowering of utility costs by allowing the installation of Energy Star appliances such as washing machines, air conditioners, water heaters and other appliances that have the potential to reduce energy costs for the household. The program also allows the replacement of high cost, low-efficiency heating systems with high-efficiency systems including Energy Star heat pumps. The TrAILCo program also allows for the installation of standard weatherization measures to better serve a greater number of clients more effectively and efficiently and stretch the federal weatherization dollars further.

#### IV.5 Policy Advisory Council Members

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

Ann McDaniel/Executive Director - WV Statewide Independent Living Council	Type of organization: Other Contact Name: Phone: 3047664624 Email: <a href="mailto:ann.meadows@wvsilc.org">ann.meadows@wvsilc.org</a>
Gaylene Miller/Senior State Director, AARP	Type of organization: Non-profit (not a financial institution) Contact Name: Phone: 3043404602 Email:
Jacqueline L. Roberts/Director/Consumer Advocate Division/PSC	Type of organization: Unit of State Government Contact Name: Jacqueline L. Roberts Phone: 3045580526 Email: <a href="mailto:jroberts@cad.state.wv.us">jroberts@cad.state.wv.us</a>
Mary Chipps/Executive Director, WV Community Action Partnership	Type of organization: Other Contact Name: Phone: 3043472277 Email:
Steve Gilman	Type of organization: Non-profit (not a financial institution) Contact Name: Phone: 3047526868 Email: <a href="mailto:Steve@prideinlogan.com">Steve@prideinlogan.com</a>
Tammy Stafford/EE & Consumer Programs Manager, Appalachian Power	Type of organization: Utility Contact Name: Phone: 3043484182 Email: <a href="mailto:tcstafford@aep.com">tcstafford@aep.com</a>

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

Date Held    Newspapers that publicized the hearings and the dates the notice ran

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- 03/23/2021 An announcement of the Public Hearing was posted for three (3) consecutive days, at least ten (10) days prior to the Virtual Public Hearing in eight (8) major newspapers throughout the state. The Virtual Public Hearing was announced March 22, 2021 on the WV Development Office, Community Advancement & Development Office (WVCAD) Weatherization website, and the legal advertisements to announce the Public Hearing statewide ran March 23, 25, 25, 2021. The WVDO held the Virtual Public Hearing on April 6, 2021. The following newspapers advertised the hearing: • Bluefield Daily Telegraph • Charleston Newspapers • Dominion Post (Morgantown) • The Herald Dispatch (Huntington) • Parkersburg News and Sentinel • Register-Herald (Beckley) • The Journal (Martinsburg) • Wheeling Newspaper, Inc. The "Virtual Public Hearing Notice" that appeared in the newspapers is included as an attachment. WVDO also attached evidence that each newspaper published the announcement as back-up documentation. A court reporter was retained to provide a transcript of the Virtual Public Hearing.
- 04/13/2021 A virtual meeting with the State Policy Advisory Council (PAC) was held on April 13, 2021 for their review and input in the PY2021 DOE State Plan. A major focus for this meeting was the impact of the re-weatherization date removal and move to a rolling 15 year date. Also, advertising and low applicant numbers statewide (and how to assist subrecipients in this area) received good input.

**IV.7 Miscellaneous**

**Policy Advisory Council**

The Policy Advisory Council (PAC) historically meets at least once a year with periodic updates sent to members if major changes occur. A PAC meeting is scheduled during the WV WAP State Plan process to solicit input from the PAC Committee on the development of the program for PY 2021 – 2022.

The PAC works to advise state weatherization staff on issues, challenges, and future direction of the program. The council is composed of members of associations and organizations serving the citizens of West Virginia. PAC members, by their leadership roles in the larger community, bring added value from an outside perspective to the program. The committee can also be an advocate for the general public about the Weatherization Assistance Program, low-income energy needs, and energy efficiency. The PAC will advise WV WAP staff on policy based on their knowledge, perspective, and sensitivity to their particular constituency.

During the virtual PAC meeting on April 13, 2020 members had a chance to provide input for the PY 2021 – 2022 State Plan as well as discuss challenges of the upcoming year. PAC members also provided their expertise in marketing and promoting programs, and vast knowledge of the WAP Network and obstacles being faced. The Agenda and Meeting Notes are submitted as an attachment to this plan.

**2019 American Customer Satisfaction Index (ACSI) Survey Action Plan**

Per the Overview in the 2019 ACSI Survey, the WVDO will address the specific concerns noted, "Frequency of Communications," "Consistency of Responses Received," "Technical Assistance," "Ability to Answer Questions," and "Clarity and Consistency of Assistance Provided."

For Program Year 2021, WVDO/WV WAP will conduct Quarterly Executive Director meetings in conjunction with the Quarterly WV Community Action Partnership Board meetings. These meetings are important for maintaining communication with the subgrantee EDs/CEOs, and provides an opportunity to express their concerns, ask questions, hear of best practices, and specifically to discuss important deadlines coming up, possible policy changes, and scheduling for trainings/meetings, etc.

To provide consistent feedback and allow for open communication WVDO holds monthly Zoom Meetings for Weatherization Coordinators and other staff (as determined by the subgrantee). Questions or concerns are discussed in an open format, with concerns documented and responses/guidance provided in a timely manner by the WV Weatherization Manager. These monthly meetings have allowed for Coordinators and staff to stay up-to-date with new issues facing WAP not only in West Virginia but nationwide. An Agenda is presented before each meeting. Once the Agenda has been covered the meetings turn to open discussion on whatever the Coordinators want to discuss. During PY 2020 - 2021, Executive Directors & CEOs asked to join, which has allowed for another opportunity for WVDO to interact with those that are ultimately responsible for their WAP services.

**"Recipient Business Officer"**

*Name:* Jennifer Ferrell – Director WVCAD

*Email:* [Jennifer.L.Ferrell@wv.gov](mailto:Jennifer.L.Ferrell@wv.gov)

*Phone:* 304 – 558 – 2234

**"Recipient Principal Investigator"**

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*Name:* Mark Adams – Weatherization Manger

*Email:* [Mark.A.Adams@wv.gov](mailto:Mark.A.Adams@wv.gov)

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# **West Virginia Weatherization Assistance Program**

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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

The West Virginia Weatherization Assistance Program (WV WAP) will ensure that every dwelling weatherized meets both client eligibility and building eligibility requirements as detailed in *Sections V.1.1 and V.1.2*.

**Eligibility Procedures:**

The State of West Virginia Development Office (WVDO) has established an extensive intake/application process involving obtaining information from prospective program participants before a decision can be made on their eligibility for weatherization assistance. Each applicant must provide all the items outlined as "mandatory data fields" in the application process/form. All prospective applicants will be required to identify and provide verification of the amount and source of the total income for their household in compliance with the U.S. Department of Health and Human Services 2021 poverty guidelines as identified in the Federal Register.

WVDO will use the Definition of Income provided in DOE WPN 21-3 Poverty Income Guidelines and Definition of Income regarding cash receipts, exclusions, proving eligibility, and consideration of child support. Additional data fields included in the state data management system require the collection and reporting of household demographic and residence specific information including whether the applicant rents or owns his/her home, among other information. All applicants are required to sign their application and certify to the validity of the information provided. Falsification of an application is subject to ineligibility.

The WV WAP Field Guide provides specific and detailed guidance on how the subrecipients are to utilize the various functions of the database management system. This ensures there is consistency among the WV WAP Network on how a client proceeds through the various stages of the weatherization process, including the intake process. This policy will remain in effect for PY 2021 – 2022.

**Income Verification Procedures:**

The eligibility documentation is maintained in the database management system and may be supplemented with a physical client file. All eligibility documentation is to be reviewed for compliance by the subrecipient prior to weatherization services being provided, and then entered into the database management system for eligibility calculation. If one (1) year or more has lapsed between the date of application and the date weatherization services is scheduled to begin on a particular job, the income of that client must be re-verified as per WV WAP and DOE requirements. WVDO provides a secondary review of eligibility documentation and process by selecting a sample of weatherization dwellings during the monitoring process. WVDO also provides to the WV WAP Network the Poverty Income Guidelines and Definition of Income document as revised by DOE each program year to supplement the *Income Eligibility Policy*.

All fifty-five (55) counties of West Virginia are eligible for weatherization services and are intended to be served by the WV WAP. Any West Virginia resident who meets client eligibility requirements and whose dwelling meets building eligibility requirements would be eligible to receive weatherization services. As per DOE requirements and 10 CFR 440.16(b), priorities are given to certain sectors of the eligible population. The WV WAP has also incorporated some priority features to enhance the DOE required priority eligible population categories and allow for reasonable, efficient, and effective implementation of the WAP, including all funding sources. These priorities and the process followed are described in *Section V.3 Priorities*

Describe what household eligibility basis will be used in the Program

**Definition of Income Used to Determine Eligibility:**

The WV WAP will determine eligibility of a dwelling unit based on the amount of household income and the conformity of that income to criteria established by the Low-Income Home Energy Assistance Act of 1981, 42 U.S.C. 8621. All subrecipients in the WV WAP will use 200% of the poverty guidelines and definition of poverty as stated in DOE WPN 21-3 Poverty Income Guidelines and Definition of Income, dated February 10, 2021, and published in the Federal Register February 1, 2021 as updated by the U.S. Department of Health and Human Services under the authority of 42 U.S.C. 9902(2), effective January 13, 2021.

The WV WAP data management system calculates a twelve (12) month income period needed to create an annualized income equivalent for comparison to the

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poverty guidelines. Annualized income may be calculated using less than twelve (12) months of income information. At least one (1) month of recent income is necessary for the database management system to calculate the annualized income for eligibility determination. In addition, family units that have received cash assistance payments under Title IV or XVI of the Social Security Act, or applicable State or local law paid during the twelve-month period preceding application, will be eligible for weatherization pursuant to 10 CFR Part 440.22.

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

The steps in the application/intake process detailed in the previous *Eligibility Procedures Section* ensure DOE weatherization services shall only be provided to eligible populations. These same procedures and parameters including income eligibility are utilized for West Virginia's Low-Income Home Energy Assistance Program (LIHEAP) Weatherization services.

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

Procedures to determine that units weatherized have eligibility documentation

### **Verification Procedures:**

#### **Income Verification Procedures:**

The eligibility documentation is maintained in the database management system and may be supplemented with a physical client file. All eligibility documentation is to be reviewed for compliance by the subrecipient prior to weatherization services being provided, and then entered into the database management system for eligibility calculation. If one (1) year or more has lapsed between the date of application and the date weatherization services is scheduled to begin on a particular job, the income of that client must be re-verified as per WV WAP and DOE requirements. WVDO provides a secondary review of eligibility documentation and process by selecting a sample of weatherization dwellings during the monitoring process. WVDO also provides to the WV WAP Network the Poverty Income Guidelines and Definition of Income document as revised by DOE each program year to supplement the *Income Eligibility Policy*.

All fifty-five (55) counties of West Virginia are eligible for weatherization services and are intended to be served by the WV WAP. Any West Virginia resident who meets client eligibility requirements and whose dwelling meets building eligibility requirements would be eligible to receive weatherization services. As per DOE requirements and 10 CFR 440.16(b), priorities are given to certain sectors of the eligible population. The WV WAP has also incorporated some priority features to enhance the DOE required priority eligible population categories and allow for reasonable, efficient, and effective implementation of the WAP, including all funding sources. These priorities and the process followed are described in *Section V.3 Priorities*.

#### **Procedures to determine that units weatherized have eligibility documentation:**

As defined in 10 CFR 440.3, low-income means that income in relation to family size which:

1. Is at or below 200 percent (200%) of the poverty level determined in accordance with criteria established by the Director of the Office of Management and Budget (OMB), except that the Secretary may establish a higher level if the Secretary, after consulting with the Secretary of the United States Department of Agriculture (USDA) and the Secretary of Health and Human Services, determines that such a higher level is necessary to carry out the purposes of this part and is consistent with the eligibility criteria established for the Weatherization Program under Section 222(a)(12) of the Economic Opportunity Act of 1964;
2. Is the basis on which cash assistance payments have been paid during the preceding twelve-month period under Titles IV and XVI of the Social Security Act or applicable State or local law; or
3. If a Grantee elects, is the basis for eligibility for assistance under the Low-Income Home Energy Assistance Act of 1981, provided that such basis is at least 200 percent (200%) of the poverty level determined in accordance with criteria established by the Director of the OMB.

The WVDO has established an extensive intake/application process involving obtaining information from prospective program participants before a decision is made on eligibility for weatherization assistance. Each applicant must provide all the items outlined as mandatory data fields in the application process/form. The steps in the application/intake process ensure DOE weatherization services shall only be provided to eligible populations.

1. WVDO requires all subrecipients ensure client eligibility during in which services are delivered. All prospective applicants will be required to identify and provide documentation of the amount and source of all income for the household and client ownership.

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**a. Availability of Supporting Documentation:** Each Client File must contain an application from the client that contains the required demographics and income for the entire family living in the residence. The Client File must also contain evidence provided by the subrecipient that the client is eligible to receive Weatherization Assistance Program (WAP) services. This evidence may include, but is not limited to, a memorandum from a third-party certification office stipulating the income levels of the family or source documentation for each income source listed on the application. Additional information is required to prove home ownership. Examples to meet this requirement include, but are not limited to, deeds/titles, property tax records with street address, municipal websites, mortgage documents, insurance documents. These documents must be stored in the Client File in the data management system.

**b. Self-Certification:** After all other avenues of documenting income eligibility are exhausted, self-certification is allowable. However, evidence of the various attempts at proving eligibility must be contained in the Client File, **including a notarized Zero Income Affidavit** signed by the potential applicant indicating that the applicant has no other proof of income.

**Income Documentation for Renters:**

The intake and certification procedures for tenants adds two steps to the procedures required for homeowners. The WAP regulations Section 440.22(b)(1) 1. Require the subrecipient to obtain written permission from the property owner or agent before any work is done on a building containing rental units; and (2) (10 CFR 440.22(b)(3)) requires the Grantee to establish procedures for rental units to ensure:

- The benefits of WAP improvements will accrue primarily to the low-income tenants.
  - For a period of two (2) years from the date of signature on the "Weatherization Rental Release and Agreement" form, the rent shall not be raised because of the increased value of dwelling unit(s) due solely to weatherization assistance provided under this program;
- No undue or excessive enhancement shall occur to the value of the building.

**Describe Reweatherization compliance**

**Reweatherization:**

On January 8, 2021, DOE released WAP Memorandum 075, Weatherization Assistance Program Reauthorization Impacts for State Plan Submission. Memo 075 addressed the P.L. 116-260 omnibus legislative package that included several significant changes for the WAP. The legislative package included the bill Energy Act of 2020. Section 101 1(h) of the Energy Act of 2020 amended 42 U.S. Code § 6865(c) (2) and removed the reweatherization date, September 30, 1994, and created a rolling option.

*"Dwelling units weatherized (including dwelling units partially weatherized) under this part, or under other Federal programs (in this paragraph referred to as 'previous weatherization'), may not receive further financial assistance for weatherization under this part until the date that is 15 years after the date such previous weatherization was completed. This paragraph does not preclude dwelling units that have received previous weatherization from receiving assistance and services (including the provision of information and education to assist with energy management and evaluation of the effectiveness of installed weatherization materials) other than weatherization under this part or under other Federal programs, or from receiving non-Federal assistance for weatherization."*

The inclusion of "other Federal programs" includes all Federal funds including Low-Income Home Energy Assistance Program (LIHEAP, Housing and Urban Development (HUD), and United States Department of Agriculture (USDA) "weatherization" activities. The WV WAP has procedures in place to comply with DOE regulations regarding "Reweatherization." Prior to any weatherization activity, a unit must be evaluated to determine whether previous weatherization services were provided 15 years from the date of new application. If services have been provided *within 15 years of this date* with DOE funds, the unit is not eligible for additional weatherization services with DOE funds.

The following actions must be taken on each unit prior to weatherization services to ensure the homes that have received weatherization services during the 15-year period are not reweatherized:

1. Each client's address must be entered into the data management system to identify whether the client's home has been weatherized during or after 2007 (length of WV WAP historical records with searchable addresses).
2. Each client's name must be entered into the data management system's "Old Weatherization Data" module to check if the client has previously been reported as a completion during 1996 to 2007 (length of WV WAP historical records with client names only). If the client's name is found in the data management system as having had weatherization services, the subrecipient will verify with the client if they are living at the same address as when they received weatherization services in the past. If the client verifies that this is the same address, then the dwelling is ineligible for weatherization services.
3. A secondary verification occurs as each client must be asked whether their home has been weatherized in the past 15 years from the



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date of application.

4. If a dwelling passes the first two (2) verification steps, a third verification step is performed as a visual inspection of each home must be completed by an auditor to identify whether previous weatherization measures have been performed. If the home was completed after September 15, 2011, subrecipients are required to place standardized tags on specified areas of dwellings after completing the weatherization process.
5. If there is no documented, verbal, visual, or physical evidence of previous weatherization services, the subrecipient may proceed with weatherization services on the dwelling.
6. Subrecipients may provide services to a dwelling unit previously weatherized **prior to the 15-year rolling date/date of application**.
7. The DOE-issued *Weatherization Program Notice 12-7 Disaster Planning and Relief* allows for additional work to be done on homes due to natural disasters. In the event of a declared Federal or State disaster, allowable expenditures under WAP include:
  - The cost of incidental repairs to an eligible dwelling unit if such repairs are necessary to make the installation of weatherization materials effective.
  - The cost of eliminating health and safety hazards, elimination of which is necessary before the installation of weatherization materials (10 CFR 440.18(d)(9); 10 CFR 440.18(d)(15).
  - To the extent that the services are in support of eligible weatherization (or permissible "Reweathering") work, such expenditure would be allowable.

In the event of a declared Federal or State disaster, weatherization crews may return to a unit reported as a completion to DOE that has been "damaged by fire, or act of God to be reweatherized, without regard to date of weatherization" as per 10 CFR 440.18(f)(2)(ii). Local authorities must deem the dwelling unit(s) salvageable as well as habitable and if the damage to the materials is not covered by insurance or other form of compensation.

- Debris removal from a dwelling unit that is not to be weatherized would not be an allowable cost.
- Weatherization personnel can be paid from DOE funds to perform functions related to protecting the DOE investment. Such activities include: securing weatherization materials, tools, equipment, and weatherization vehicles, or protection of local subrecipient weatherization files, records and the like during the initial phase of the disaster response.
- Using DOE funds to pay for weatherization personnel to perform relief work in the community as a result of a disaster is not allowable.
- Local agencies may use weatherization vehicles and/or equipment to help assist in disaster relief provided the WAP is reimbursed according to the *DOE Financial Assistance Regulations*, 10 CFR Part 600 and 2 CFR 200.

WAP rules require that priority be given to identifying and providing weatherization assistance to elderly persons, persons with disabilities, families with children, high residential energy users, and households with high energy burdens as per 10 CFR 440.16(b). However, it would be permissible to consider households located in the disaster area as a priority as long as the households are eligible and meet one (1) of the priorities established in regulation and are free and clear of any insurance claim or other form of compensation resulting from damage incurred from the disaster.

In the event of a Federal or State implemented work stoppage which suspends on-site work, the WVDO will follow all guidance provided by DOE or the Governor's Office and effectively relay this information to all subrecipients. On-site WAP work will resume only when any work stoppage or stay at home mandates are lifted, and the subrecipient can follow safe return to work practices and procedures.

As referenced in #4 above, WVDO developed and implemented a *Weatherized Unit Tagging Procedure* policy to identify dwellings as "Weatherization Completions" and maintain compliance with DOE's *Reweathering Policy*. WV WAP's *Weatherized Unit Tagging Procedure* requires the placement of a permanent and standardized tag on each completed dwelling unit including the following information:

- a. Subrecipient Name
- b. West Virginia Weatherization Assistance Program
- c. Sequential Number
- d. "DO NOT REMOVE" indication
- e. Initials of subrecipient Quality Control Inspector and date of Quality Control Inspection

There are specific locations in the dwelling outlined in the policy where the subrecipients are to attach the tags in an effort to make as permanent as possible. The subrecipient is to attach two (2) tags in different locations in each dwelling in case one (1) would become

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detached. The subrecipient must also maintain a picture of the tag and its location in the dwelling unit as a Portable Document Format (PDF) in the data management system. Failure to adhere to the policy could result in the dwelling unit not being deemed as a "Completion" and in turn all associated costs could be disallowed. The procedure implemented also maintains sufficient accountability of the subrecipient (and specific Quality Control Inspector) providing the weatherization services on a particular dwelling.

Describe what structures are eligible for weatherization

**Eligible Structures:**

Subrecipients shall ensure that weatherization services are being provided to low-income persons that live in standard types of housing, i.e., single-family, rentals, manufactured housing, and multifamily buildings. Subrecipients will exercise caution when approaching non-traditional type dwelling units including, but not limited to, shelters and apartments over businesses WVDO will seek guidance from the WV DOE Project Officers as necessary if the WV WAP approaches a non-traditional dwelling. Weatherization of non-stationary campers and trailers that do not have a mailing address associated with the eligible applicant will not be allowed, even if utilizing a post office box. For procedures regarding structures that require deferral of services due to the structure being deemed at least temporarily ineligible, refer to the *Deferral Process* in a following segment of this section.

WVDO will disallow partial weatherization of a dwelling if turned in as a completion. A dwelling will only be deemed a completion if all measures called for from the audit have been completed, the unit has been reviewed and signed off on by a certified Quality Control Inspector, and all required documents are uploaded into the database management system. The Quality Control Inspector signature date will constitute the date of completion with no further work allowed on the dwelling. All required documents must be uploaded into the database management system on or prior to the Quality Control Inspection form date.

If in very rare and extreme circumstances, a client does not allow a subrecipient to complete the Quality Control Inspection in order to deem the dwelling as a completion, or the crew must halt weatherization for unforeseen circumstances with the client/dwelling (crew safety concern, death of a client, dwelling is vacated and/or sold, etc.), the subrecipient must notify WVDO. In cases where weatherization work was started but cannot be completed, signed and dated documentation must be entered into the client file as to why the weatherization work was stopped. Allowable expenses can be submitted, but the dwelling will not be counted as a completion. This option will be extremely rare in occurrence and only approved if all reasonable options to complete weatherization work including the final Quality Control Inspection have been attempted. WVDO will also pursue all other possible remedies including non-DOE funding sources for work performed, if allowable.

**Federal or State Work Stoppage with Direct Impact on Weatherization**

In the event of a Federal or State Government implemented work stoppage which suspends on-site weatherization work, the WVDO will follow all guidance provided by the Governor's Office, State Legislation, and/or DOE, and effectively relay this information to all subrecipients. On-site WAP work will resume only when any work stoppage or stay at home orders are lifted. The subrecipient is then responsible for their employees to resume work following safe work practices and procedures.

**Tiny Homes/Auxiliary Dwelling Units:**

The WV WAP may provide weatherization to Tiny Homes and Auxiliary Dwelling Units (ADUs). ***If the dwelling/unit is under 550 square feet (51.1 m2) it must be submitted to WVDO for approval to the Weatherization Manager or designated reviewer.*** The dwelling must have a living space of no less than 220 square feet (20.4 m2) of conditioned floor area. An additional 100 square feet (9.3 m2) of conditioned floor area for each occupant of such dwelling in excess of two (2) must be added. The dwelling's minimum square footage calculations shall be determined as per ANSI Standard Z765-2003.

In addition to ANSI Z765-2003:

1. Living space (finished areas/rooms) must have a conditioned floor area minimum of 70 square feet (6.5 m2). ***Exception: Kitchens***
2. The dwelling must have a separate bathroom containing a fully functioning sink, lavatory, and a bathtub or shower.
3. If the unit/dwelling's floor, frame, or foundation is prefabricated, a Manufactured Home Energy Audit (MHEA) must be used.
4. If the unit/dwelling is on slab, block, or is free of any typical manufactured housing supports a National Energy Audit Tool (NEAT) must be used.
5. If the unit/dwelling has affixed wheels, axels, or is made to be towable, the unit is considered a Recreational Vehicle (RV) and cannot be weatherized.



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**Historic Preservation**

On May 14, 2020, DOE, WVDO, and the WV Department of Arts, Culture, and History (WVSHPO) entered into a Programmatic Agreement (PA) to fulfill requirements of Section 106 of the National Historic Preservation Act for certain DOE undertakings in WV. As noted in DOE Weatherization Program Notice 10-12, DOE in coordination with the Advisory Council on Historic Preservation (ACHP) and the National Conference of State Historic Preservation Officers (NCSHPO), developed a Prototype Programmatic Agreement (PA) to address historic preservation requirements for the WAP. The WV WAP is evaluating all National Historic Preservation Act (NHPA) Section 106 reviews utilizing guidelines set forth in the current PA, which was amended on November 20, 2020 to extend the PA to December 31, 2030. All measures that fall outside the WAP, exempt from NHPA Section 106 review are being approved by West Virginia SHPO (WVSHPO). WVDO has one (1) staff member trained to perform Historic Preservation reviews, approvals, and to provide guidance to WV WAP subrecipients. One WVDO staff member has completed Section 106 Essentials.

Describe how Rental Units/Multifamily Buildings will be addressed

**Rental Units:**

The WV WAP may provide weatherization to rental units, including multiple dwelling units (MDUs). The WV WAP has procedures that address the protection of renters' rights as per 10 CFR 440.22(b)(3) and 440.22(c)-(e). No rented dwelling unit can be weatherized without first obtaining the written permission of the owner (or his/her agent) of the dwelling unit. Completion of the "Weatherization Rental Release and Agreement" form is mandatory for multifamily rental units only.

The "Weatherization Rental Release and Agreement" form is designed to assure the following:

1. That the benefits of weatherization assistance shall reside primarily with the low-income tenants;
2. For a period of two (2) years from the date of signature on the "Weatherization Rental Release and Agreement" form, the rent shall not be raised because of the increased value of dwelling unit(s) due solely to weatherization assistance provided under this program;
  - Should a rental increase occur and the tenant perceive it to be due solely to the weatherization services provided, the tenant would notify the applicable subrecipient who would then contact WVDO, or the tenant may contact WVDO directly.
  - WVDO will instruct the tenant to file a written complaint with WVDO detailing the situation and the perceived reason for the rent increase.
  - WVDO will work with the subrecipient and make contact with the landlord and notify that a complaint has been filed and provide the landlord with a copy of the complaint. The landlord will have the opportunity then to appeal the complaint.
  - WVDO will obtain all pertinent information applicable to the dwelling and the weatherization services received and will review all of the information provided, seeking guidance from DOE and/or legal counsel as needed.
  - WVDO will work to resolve the situation in a way agreeable to all parties. WVDO encourages the use of alternative dispute resolution procedures including arbitration.
3. That no undue or excessive enhancement shall occur to the value of the dwelling unit;
4. That no landlord contributions are allowed for single-family housing;
5. That if an owner of the dwelling unit qualifies for WV WAP, no landlord contribution is expected; and
6. For multifamily buildings, that a landlord outside the poverty guidelines of the WV WAP understands the requirements set forth by the "Weatherization Landlord Owner Investment" form which mandates a landlord contribution of twenty-five percent (25%) of the total cost of the various weatherization measures to the subrecipient performing the work.

In the event that all possible negotiations with the landlord have been attempted yet the landlord refuses contribution, the dwelling may still be weatherized with proper documentation and approval from WVDO.

All multifamily units will follow the established client prioritization protocols as established in single-family weatherization, unless otherwise determined by WVDO. Multiple dwelling units are defined as buildings containing five (5) units or more and can be weatherized if sixty-six percent (66 %), (fifty percent (50%) for duplexes and quadraplexes) of the occupants qualify for weatherization assistance pursuant to Federal Regulation 10 CFR 440.22. Weatherization services provided to multifamily dwelling units will adhere to DOE WPN 16-5 Multifamily Weatherization and WPN 16-6 Weatherization of Rental Units. The "West Virginia Multifamily Owner Agreement" which is similar to the owner agreement described above, but is adapted for multifamily units, which adheres to DOE WPN 16-5.

Describe the deferral Process

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The WV WAP has a well-defined *Deferral Policy* to assist in the decision to defer weatherization assistance on an eligible dwelling in attempt to standardize the procedure throughout West Virginia. As per the policy, a deferral does not mean that weatherization assistance will never be available, but that work must be postponed until the problems at the home can be resolved. Subrecipient crews and contractors are expected to pursue all reasonable options on behalf of the client, within program guidelines. After an on-site visit has been conducted, if conditions warrant and the subrecipient determines that the home meets one (1) or more of the following deferral conditions, a letter must be sent to the client outlining the conditions present at the dwelling and the justification for deferral. The reason for deferral must be selected and documented in the database management system and the database management system automatically generates the deferral letter with the proper justification to be submitted to the client.

Possible deferral conditions include but may not be limited to the following:

- a. Structurally unsound dwelling that is not suitable and adaptable to weatherization services, and the WAP does not have the resources to do necessary repairs;
- b. Electrical or plumbing hazards that cannot be resolved prior to or as part of weatherization services;
- c. The presence of raw sewage around or in any part of the dwelling;
- d. The presence of a dead animal, or animal feces, in an area where program staff must install weatherization measures;
- e. Excessive debris and clutter in and around the dwelling that limits access to the dwelling and areas within the dwelling;
- Clutter Image Rating: Living Room – Dwelling deferred with rating of = 4
- Clutter Image Rating: Bedroom – Dwelling deferred with rating of = 4
- Clutter Image Rating: Kitchen – Dwelling deferred with rating of = 4
  - f. Pets unchained or running loose that would be distracting or unsafe to program staff;
  - g. The client is uncooperative, abusive, or threatening to the crew, or there is an apparent threat of violence or abuse to any program worker, or any household member during the weatherization process;
  - h. The presence or use of any controlled substance in the dwelling during the weatherization process;
  - i. Environmental hazards, such as serious moisture problem, known excessive radon, friable asbestos, excessive lead paint, or other environmental hazards that cannot be resolved prior to or as part of the weatherization services;
  - j. Evidence of substantial infestation of rodents, insects, bats, or other harmful/objectionable animals that are difficult to control;
  - k. Major remodeling is in progress, limiting the proper installation of weatherization measures;
  - l. Substantial standing water in or around the crawl space or basement area limiting the proper completion of weatherization measures;
  - m. Dwelling resident has a medical condition that prohibits the installation of insulation and/or other weatherization measures;
  - n. No cost-effective or appropriate health and safety measures can be done to the house resulting in minimal energy savings;
  - o. Customer in arrears with utility vendor, gas service has been shut off, or electric service has been shut off;
  - p. Client refusal of primary energy conservation measure (SIR = 1);
  - q. Client refusal of health and safety measure(s) necessary for client safety;
  - r. Income verification needed;
  - s. Updated utility information needed; and
  - t. Other conditions not listed above that prohibit complete weatherization.

There are several steps detailed in the WV WAP *Deferral Policy* outlining the subrecipient and/or client's responsibilities after the aforementioned deferral letter is generated in order to possibly complete weatherization for a client that was originally deferred. These steps involve allowing the client to correct the identified issues or barriers to weatherization and providing the subrecipient with documentation that issues have been addressed. There is also a procedure in place in the event that issues are not addressed, or no response is received from the client. Once reasons for deferral are resolved, the application is re-activated within the data management system. Depending on the timing of the correction of deferral issues, eligibility criteria including income verification and prioritization status may need refreshed. The WV WAP *Deferral Policy* outlines the timing parameters in more detail. All applicable steps must be followed and all required documentation retained. In PY 2021 – 2022, WVDO will develop a Deferral Tracking Template to monitor deferral reasons. The results will be provided to the subrecipients during monthly Wx Coordinator meetings, and the Quarterly ED/CEO meetings.

In Program Year 2020, the WVDO began providing information on the U.S. Department of Agriculture (USDA) 504 Loan and Grant Programs to client inquiries at WV WAP where details provided by the client fall outside the scope of DOE weatherization, e.g., new roofs, windows, home repair beyond the LIHEAP DHHR Home Repair component, etc. In PY 2018, WVDO attempted to start a "pilot program" with one of the WV subrecipients to assist clients that were deferred due to housing stock/home repair issues. At that time, the WVDO/USDA could not get the pilot program running. WVDO will make efforts to re-establish communication with the USDA in West Virginia to resume and expand the previous pilot program. In PY 2021 WVDO will provide referral information to the subrecipients on the 504 Programs as a possible referral opportunity for deferred clients.

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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.

In accordance with Federal rule, the State of West Virginia recommends that tribal organizations not be treated as local applicants eligible to submit an application to operate a Weatherization Assistance Program. In accordance with 10 CFR 440.16(f), low-income Native Americans will receive benefits equivalent to assistance provided to other low-income persons within the State as eligible individual applicants under program guidelines.

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

The method used to select each area to be served by a weatherization project will be as follows:

1. All fifty-five (55) counties in West Virginia will be served by the WV WAP.
2. Selection of weatherization subrecipients or qualified entities is made pursuant to 10 CFR 440.15.
3. Subrecipients in the State operate the WAP in service areas designated by specific counties, barring any unforeseen circumstances necessitating service area alteration. Subrecipients may contract with one another in efforts to more efficiently and effectively provide weatherization services to all counties within a subrecipient's service area.
4. In the event that WVDO determines that a subrecipient fails to meet WV WAP Grant Agreement requirements, options include (but are not limited to) allocating the funds to other eligible subrecipients or qualified entities in the State.

**Redistribution Provision:** As necessary through the administration and management of this award, WVDO may move funds between cost categories, functions, and activities to fully expend the monies during the budget period, which could include moving funds between subrecipients. All budget alterations or revisions will be in accordance with 2 CFR 200.308(e) and all other applicable Federal rules and regulations. Parameters and criteria outlining situations in which a subrecipient would have an allocation reduced, receive an additional allocation, or need to move funds within their own budget are laid out in the subrecipient WV WAP Grant Agreements, following all applicable Federal rules and regulations.

**V.3 Priorities**

The WV WAP will give priority to identifying and providing weatherization assistance to elderly persons (60 years of age or older), persons with disabilities, and households with children (18 years of age or younger). Priority can also be given to households with a high-energy burden which has two (2) components to its definition. Clients can be considered high energy burden if:

- a. Fifteen percent (15%) or more of the household income is utilized to pay for energy usage; and/or
- b. Clients are eligible for the Energy Crisis Intervention Program (ECIP), an emergency heat services component of the LIHEAP funding the WV WAP receives from the West Virginia Department of Health and Human Resources (DHHR).

Priority can also be given to clients considered high energy users. Clients will be considered high energy users if \$2,100 or more is expended by the client on residential energy annually, which will be calculated within the database management system utilizing utility bill information.

These priorities are weighted the same with regards to the points they receive except for ECIP eligibility allowing for comprehensive weatherization services to be provided within a reasonable amount of time from when the client received emergency heat services, increasing the efficiency and cohesiveness between the programs.

Another factor considered when prioritizing clients in order to have a reasonable and equitable system is the time spent on the Waitlist; however, clients only receive one (1) point per year and therefore it will be ensured that time on the Waitlist does not outweigh other factors



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within the prioritization system.

The WV WAP has also incorporated priority features to enhance the DOE required priority eligible population categories and allow for reasonable, efficient, and effective implementation of the WAP. Such prioritization features allow for consideration of timing of services provided by other funding sources.

There are utility funds that supplement the WV WAP, and Federal and non-Federal resources are blended in order to serve more low-income clients as well as in some cases provide services in addition to those the traditional WAP is able to provide. There are situations in which clients eligible for certain utility program funding may receive additional priority in order for the utility funds to be expended effectively and within the proper time periods. This allows the WV WAP to continue to obtain these funds for future program years.

Finally, there could be instances in which clients are given priority as part of a multifamily project completion. Clients in an identified eligible multifamily dwelling may not all be at the top of the prioritization list, and therefore additional priority could be given to the clients in order for the project to be completed. However, WVDO requires advance planning from subrecipients for the completion of multifamily dwellings and ensures that multifamily projects do not supplant services provided to single-family dwellings, which are the large majority of completions for the WV WAP.

WVDO has developed a point system to rank clients using the aforementioned prioritization criteria in the data management system that tracks all clients, dwellings, and weatherization work. The WV WAP subrecipients must adhere to this prioritization list and point system within the data management system unless otherwise directed or approved by WVDO. WVDO may modify the prioritization system throughout the Program Year within the parameters of the program in instances including, but not limited to, adjusted rules and regulations or additional funding sources identified. The intent of the prioritization system will always remain consistent on serving low-income clients as efficiently and effectively as possible, working to reduce energy costs, as well as to expending all funding sources within the proper timeframes and in compliance to all applicable rules and regulations. Subrecipients do not have the ability to manipulate or alter the prioritization system or criteria without written approval from WVDO.

The data management system only allows those clients highest on the priority list (based on the previously described point system) to be selected for service by a particular subrecipient, unless otherwise approved by WVDO. The system allows for a reasonable "pool" of high priority clients a subrecipient must select from so that there is flexibility built into the system, while also ensuring all clients served are high priority clients. Due to the number of high priority clients that will be available for a subrecipient to select from, WVDO does not anticipate any issue with all counties in West Virginia being provided weatherization services in an efficient and effective manner throughout the year. However, this process will be monitored throughout the year by WVDO and adjusted if necessary.

Subrecipients shall ensure that weatherization services are being provided to low-income persons that live in standard types of housing, i.e., single-family, rentals, manufactured housing, and multifamily buildings. Housing type is not a recognized priority and is not factored into the WV WAP prioritization process. WVDO will monitor the system through completion and deferral review to ensure eligible clients are not discriminated against due to housing type.

#### V.4 Climatic Conditions

West Virginia is the 41st largest of the 50 United States with a total area of 24,230 square miles. Within its boundaries, elevations reach as high as 4,863 feet above sea level (Spruce Knob in Pendleton County) and as low as 240 feet above sea level (Potomac River on the Virginia border).

The International Energy Conservation Code (IECC) has defined two (2) distinct climate zones that cover West Virginia. These climate zones help approximate the performance of a building within each zone due to the effects of heating- cooling demand, precipitation, and relative humidity.

Due to the variations in climate throughout the state, each energy audit shall be adjusted to most accurately model the climatic conditions of the individual location. Likewise, each energy audit shall indicate the model climate used represented as locations included in the DOE approved auditing software (the Weatherization Assistant software as described in *V.5.2 Auditing Procedures*). At the present time, Zone 1 is identified as Charleston, WV, and Zone 2 is identified as Elkins, WV, in the DOE approved auditing software. These two (2) zones are utilized by all WV WAP subrecipients, with one (1) exception; the subrecipient that covers the four (4) counties in the northern panhandle of West Virginia (Brooke, Hancock, Ohio, Marshall) uses Zone 3 identified as Pittsburgh, PA, as that location more closely fits the subrecipient's local climate profile.

A rough map of the IECC climate zones and the additional zone is included as an attachment with this application.

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Cooling Degree Days (CDD) and Heating Degree Days (HDD) data is submitted as an attachment to the application. A summary of the data for all three (3) zones is as follows:

Zone 1 – Charleston, WV:

CDD – 1011

HDD – 4718

Zone 2 – Elkins, WV:

CDD – 307

HDD – 6438

Zone 3 – Pittsburgh, PA:

CDD – 740

HDD – 5637

Based on the cooling degree days and dual climate zones, the WV WAP has included specific cooling measures under certain circumstances as detailed under *Section V.7 Health and Safety*.

The HDD and CDD data used for analysis was obtained from the link below.

- National Climatic Data Center (using information from the NOAA) <http://ggweather.com/normals/>

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

### **V.5.1 Technical Guides and Materials**

All measures and incidental repairs performed on client homes will meet the specifications, objectives and desired outcomes outlined in the Standard Work Specifications (SWS) for Home Energy Upgrades. To adhere to DOE WAP Memorandum 070, Standard Work Specification 2020 Update, Field Guide Renewal Dates and Changes, and Variance Requests, for PY 2021 – 2022, WVDO hired the Community Housing Partners Energy Solutions Training Center (CHP) to update the WV Single Family and Manufactured Field Guide Instruction Manuals.

Until final approval from DOE, WVDO and WV WAP subrecipients will continue to work under the current WV WAP SWS for Single Family Site Built and Manufactured Housing.

A link to both documents is provided:

<https://www.dropbox.com/s/0ehankm1lbdjvm0/Copy%20of%202017%20Master%20Key.xlsx?dl=0>

WVDO develops and distributes West Virginia Weatherization Program Notices (WV WPN) and West Virginia Weatherization Bulletins (WV WxBulletin) to provide additional guidance on specific requirements and major program updates and/or changes. These notices are in supplement to DOE Weatherization Program Notices and are the basis of the WVDO Field and Administration Guide (F&A Guide) which continues to be updated when new WV WAP Policies are distributed and/or new DOE guidelines mandate programmatic or field/technical changes. weatherization policy, field/technical, monitoring, and training topics that are relevant and important to the day-to-day operations at the subrecipient level.

The specifications for work to be inspected are referenced in the subrecipient DOE WAP Grant Agreement. Contractors hired by the subrecipient must have agreements that include the same technical requirements referenced above. The work of the contractor must be consistent with all WV WAP standards and requirements.

Additional training as necessary on WV WAP SWS is provided to subrecipients as detailed in *Section V.8.4 Training and Technical Assistance* to ensure consistent compliance throughout the network.



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All weatherization work is being performed in accordance with the DOE-approved energy audit procedures and 10 CFR 440 Appendix A.

**Subcontracts**

a. The subrecipient shall ensure all subcontracts are in compliance with **2 CFR 200**, as well as any applicable rules and regulations of **2 CFR 910**, and **45 CFR 75**. As per **2 CFR 200.326**, the subrecipient contracts must contain the applicable provisions described in **Appendix II to Part 200 - "Contract Provisions for non-Federal Entity Contracts Under Federal Awards"** as well as applicable provisions as per **2 CFR 200.101**. Subrecipient subcontracts will be reviewed as part of the WAP monitoring process or upon request of the Pass-through entity.

All such subcontracts shall contain provisions specifying:

- i. That the work performed by the subcontractor must be in accordance with the terms of the Program Year 2021 DOE State Plan and the 2021 Grant Agreement between the WVDO and the subrecipient;
- ii. That nothing contained in such subcontract agreement shall impair the rights of the WVDO;
- iii. That nothing contained herein, or under the Grant Agreement will create any contractual relation between the subcontractor and the WVDO;
- iv. That the subcontractor specifically agrees to be bound by the confidentiality provision found in **Section XI.B (4) Personally Identifiable Information** set forth in the PY 2021 Grant Agreement;
- v. That the subrecipient will be responsible for ensuring all subcontracted work is performed per Federal and State regulations and policies in order to be eligible for reimbursement of the approved work;
- vi. That the subrecipient will ensure that all Federal flow down provisions are included in the subcontract agreement per Federal guidelines; and
- vii. The subrecipient, by signing the PY 2021 WVDO/Subrecipient Grant Agreement, agrees to follow all provisions of the State Plan, including but not limited to, production, facilitation, operations, health and safety, and administrative requirements/regulations. Grant Agreements are submitted electronically for signature and are returned electronically. A handwritten or electronic signature is allowable. WVDO conducts an Annual State Plan meeting held in July of the new Program Year to review the new State Plan and Grant Agreements. Attendees of this meeting include Executive Directors/Chief Executive Officers, Weatherization Coordinators, and Financial staff.

**Other Renewable Energy Systems:**

Assistance under the WAP may be provided for renewable energy systems. Any renewable energy system measures implemented by a subrecipient must have WVDO written approval prior to work being performed. A site-specific Weatherization Assistant energy audit must be included as part of the client file which will be reviewed by WVDO as part of the approval process. Because the total average cost per unit exceeds the renewable measures allowance, the major effects of the regulation are to provide criteria and a procedure for integrating renewables into the WAP, and to establish a process for evaluating petitions to use new or innovative renewable energy systems in the WAP.

10 CFR 440.21(c)(1)(i-iv) specifies performance and quality standards criteria for renewable energy systems. Paragraph (c)(2) establishes a procedure for submission and action on petitions by manufacturers requesting the Secretary of Energy to certify a new technology or system as an eligible renewable energy system. Approved renewable energy systems will be listed in Appendix A of Part 440, Standards for Weatherization Materials.

Field guide types approval dates

Single-Family: 1/9/2019  
Manufactured Housing: 1/9/2019  
Multi-Family:

**V.5.2 Energy Audit Procedures**

Audit Procedures and Dates Most Recently Approved by DOE

Audit Procedure: Single-Family

Audit Name: Other (specify)

National Energy Audit Tool (NEAT), approved by DOE Approved November 15, 2016.

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Approval Date: 11/15/2016

Audit Procedure: Manufactured Housing

Audit Name: Other (specify)

Manufactured Home Energy Audit Tool (MHEA), approved by DOE November 15, 2016.

Approval Date: 11/15/2016

Audit Procedure: Multi-Family

Audit Name: Other (specify)

- 1-5 Units, individually heated/cooled, garden style apts - NEAT audit with 3 or less stories - Small MDU less than 25 units, individually heated/cooled - NEAT Audit Sampling\* - MDU greater than 25 units - DOE PO Approval

Approval Date:

Comments

*\*Audit Sampling:* To ensure a true representation of the building, an audit(s) must be completed on apartments with different configurations and heat loss characteristics (ex: 1 bed. bottom floor, 1 bed. middle floor, 1 bed. top floor, 2 bed. bottom floor). An audit of at least twenty-five percent (25%) of the total number of units in each building must be conducted. Each audit must include photo documentation of existing conditions (ex: insulation levels, venting, etc.).

WV WAP uses the Weatherization Assistant (WA) software as its energy audit tool. The Weatherization Assistant energy audit software was developed by Oak Ridge National Laboratory specifically for the use for the Weatherization Assistance Program. There are two (2) components to the Weatherization Assistant software: The National Energy Audit Tool (NEAT) for single family houses and the Manufactured Home Energy Audit (MHEA) for mobile homes. WV WAP currently uses WA version 8.9 of the Weatherization Assistant Software. Per WPN 19-4 (Section 2) and DOE Memorandum 074 the WV WAP will transition to WA version 10 by July 1, 2022.

WV WAP is working with EIS (formerly DBA Technologies) in developing an auditing tool (WAPLINK) that will assist in the collection of data for energy audits. This tool will utilize WA version 10 as its auditing software.

For multifamily units, until MulTEA is implemented and subrecipient auditors can acquire accredited training, WVDO has a procedure in place, *Multiple Dwelling Unit Policy and Guidance*. As mentioned in Section V1.2., WVDO's *Multiple Dwelling Unit Policy and Guidance* has been revised as guided by DOE WPN 16-5 Multifamily Weatherization and WPN 16-6 Weatherization of Rental Units. WVDO will continue to seek input and guidance from the DOE Project Officer on the *Multiple Dwelling Unit Policy and Guidance* on an "as need" basis.

Multifamily units are defined as buildings containing five (5) units or more and can be weatherized if sixty-six percent (66%), (fifty percent (50%) for duplexes and quadraplexes) of the occupants qualify for weatherization assistance pursuant to Federal Regulation 10 CFR 440.22.

The majority of eligible units in West Virginia are considered to be primarily garden style apartments, with less than twenty-five (25) units per structure, three (3) stories or less where the units are individually heated and/or cooled and have exterior access. Hence, these dwellings will be the focus of the WV WAP's multifamily weatherization efforts. Each multifamily unit (including those that have less than five (5) units) must meet the previously mentioned audit procedures and all other procedure and documentation requirements set forth in the WV WAP *Multiple Dwelling Unit Policy and Guidance*. Prior to commencing weatherization of the building, WVDO must review and approve of the project. A minimum twenty-five percent (25%) audit sampling must be completed on apartments with different configurations and heat loss characteristics for each building to be weatherized.

Due to increased and more complicated requirements and procedures, any multifamily project greater than twenty-five (25) units would have to be submitted for review and approval to the DOE Project Officer prior to commencing weatherization.

**V.5.3 Final Inspection**

Quality Control Inspectors (QCIs) working for, or contracted by the WV WAP must possess the knowledge, skills, and abilities in the National Renewable Energy Laboratory (NREL) Job Task Analysis (JTA) for Quality Control Inspectors. This applies to all individuals who perform an evaluation and sign off on work performed in homes, including subrecipient final inspectors and WVDO monitoring staff.

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Certified subrecipient QCI's are required to perform a final inspection of each dwelling unit before it can be reported as a completion. The final inspection must be performed by the certified QCI using the WV WAP mandated "QCI form" (attachment to application) and certify that the work has been completed in a professional manner and is in accordance with the priority determined by the audit procedures required by 10 CFR 440.21. To be in compliance with DOE WPN 15-4, during PY 2021 – 2022, only those who possess the Home Energy Professional (HEP) QCI certification may perform inspections and sign off on work performed in homes. All subrecipients have demonstrated QCI competency by receiving certification as a HEP QCI.

The credentials of each subrecipient QCI are maintained in the database management system. WVDO will review the system periodically to ensure QCI credentials remain up-to-date as well as during the annual monitoring process. WVDO has set up or reviewed/approved all training and certifications of QCI staff (as described in *Section V.8.4 Training and Technical Assistance Activities*) thereby ensuring the validity of all credentials. WVDO will continue to either set up any additional certifications for the Weatherization Network, or review and approve that the proper certification is sought and obtained and all procedures followed prior to reimbursement for any training/certification expenses.

WVDO revised the standardized QCI form in 2018, which was based on DOE's example of a quality assurance document, modified to meet the needs of the WV WAP.

The form and the associated policy provide uniform guidelines and practices for final inspections of units at the subrecipient level to ensure such are performed correctly and thoroughly prior to being submitted as a completed unit. Signatures are required on the form certifying the unit had a final inspection and met all required standards. The inspection includes an assessment of the Weatherization Assistant audit performed and confirms that measures called for on the Work Order were appropriate signifying the proper SIR.

In regards to DOE WPN 15-4 compliance, WVDO ensures through the monitoring process described in *Section V.8.3 Monitoring Activities* that work performed by the subrecipient meets the criteria outlined in the WV WAP SWS.

If during the monitoring process it is discovered a subrecipient QCI is not inspecting units using the standards adopted by the State and consistent with the WV WAP SWS, WVDO will initiate a Quality Improvement Plan (QIP) process with the subrecipient, also described in *Section V.8.3 Monitoring Activities*. WVDO will work with the subrecipient to identify the best course of action to address whatever findings may exist in the Quality Control Inspection process including both internal steps a subrecipient can take, as well as external training and technical assistance WVDO can provide or obtain. Depending on the nature and severity of the issues found, WVDO may take disciplinary or punitive actions including but not limited to the monitoring of any job a subrecipient is attempting to turn in as a completion, disallowing of costs/completions, and repayment of funds.

Due to staffing limitations of certain subrecipients, the WV WAP instituted a combination of the two (2) DOE Prescribed QCI Policies of Independent QCI and Independent Auditor/QCI. At this time, not all subrecipients have the staff to have a separate Auditor and QCI. For such subrecipients, WVDO will increase the monitoring efforts of completed dwelling units as per DOE WPN 15-4. For subrecipients that have an independent QCI, WVDO will monitor at least five percent (5%) of completed dwelling units. For subrecipients that have an Auditor that also performs the functions of QCI, WVDO will monitor at least ten percent (10%) of completed dwelling units. This percentage will increase based on issues identified and/or capacity of WVDO staff.

WVDO will work with the subrecipients and make all reasonable efforts with the funding available to train and certify enough staff to separate the Auditor and QCI duties at the subrecipient level where it is possible to do so. As stated in *Section V.8.4 Training and Technical Assistance Activities*, WVDO will continue to offer additional QCI training and certifications as funding allows throughout the PY. Except for extremely extenuating circumstances, the QCI will not have performed any other work on the completed dwelling unit. WVDO will utilize the monitoring process to ensure the integrity, impartiality, and quality of the inspection process.

#### V.6 Weatherization Analysis of Effectiveness

WVDO performs a variety of analysis of the WV WAP (statewide, subrecipient specific, objective/measure/process specific, etc.) at different times throughout a program year. Some data collection and analysis is performed on a routine basis for general oversight purposes; however, WVDO also investigates specific issues as they arise using different tools and database reports. Program production, goal attainment, and expenditure rates are tracked on a monthly basis for each subrecipient at the State level on a statistical analysis tool. These statistics are analyzed periodically, and the appropriate feedback and technical assistance is provided to those subrecipients not meeting goals, benchmarks, or compliance expectations. The subrecipients use the same statistical analysis tool for tracking their own production and expenditures to further ensure routine evaluation of local programs and reevaluation of goals when necessary.



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A monthly "Dashboard" outlining the status of the weatherization program statewide was developed by WVDO and is submitted to the Weatherization Network after all reports have been submitted, data reviewed, and funding requests approved. This spreadsheet displays a wide range of summary information including expenditure numbers, health and safety percentages, completion data, and average job cost. WVDO developed supplemental spreadsheets to the "dashboard" which breaks down information in a more detailed manner. It provides a detailed line item breakdown of expenditures per funding source and average job cost. It also displays dwelling type served and fuel type served.

WVDO works to establish production and expenditure benchmarks and includes as necessary and feasible in the subrecipient WAP Grant Agreements to increase accountability and ensure proper program management.

The WV WAP utilizes the database management system to track all weatherization work performed on any dwelling. The database management system coupled with the aforementioned statistical analysis tool and other statistical spreadsheets facilitate a review/analysis process essential for program management and oversight. The review process in various forms including desk-top review, serve as routine procedures to ensure compliance, as well as an initial monitoring process to confirm that measures are performed and tracked according to program standards, and that diagnostic and health and safety tests are performed and documented correctly. This process allows for the identification of trends that may convey a training or technical assistance need, or specific jobs that may need to be monitored due to documentation of measures.

The process entails utilizing data from the "Weatherization Assistant Recommended Measures Output Report." The WV WAP has the capability to compare productivity and associated energy savings data from the individual subrecipients and has the capability to analyze by measure. In PY 2021 – 2022, the WV WAP will continue to collect program year data and WVDO will pursue any additional development needed of the database management tool reporting capabilities to be able to utilize the data effectively in the future. WVDO performs a review of the Weatherization Audit Tool usage by each subrecipient during monitoring visits to ensure material and fuel costs are up to date in the "Setup Libraries" ensuring the system is performing accurate cost effectiveness evaluation.

As stated in section *V.8.3 Monitoring Activities*, WVDO also tracks the most significant deficiencies of subrecipients in a "Root Cause Analysis" spreadsheet that displays trends of the subrecipients' performance over a period of several years. This analysis is another contributing factor to the identification of training and technical assistance activities and priorities. The collection and analysis of the data, and the improvement of tools and processes each year keeps WVDO on a path of continuous improvement with regards to support, guidance, and oversight which in turn will keep the subrecipients on the same path regarding the weatherization services provided and management of the program.

During the monitoring process, WVDO confirms the subrecipient has internal evaluative processes in place to facilitate improvement as needed (ex: Quality Control Inspector) to identify issues internally at the subrecipient level. This subrecipient process can assist WVDO in identification of training and technical assistance needs. Also, as discussed in *V.8.3 Monitoring Activities*, WVDO also ensures through the monitoring process that identified deficiencies are corrected through a Quality Improvement Plan (QIP) and WVDO follows up and verifies the correction through desk-top monitoring or on-site follow-up visits as necessary.

## V.7 Health and Safety

The *WV WAP Health and Safety Plan* is included as an attachment. A "Material Identification Chart" is also included as an attachment as part of the *WV WAP Health and Safety Plan* which assists in identification of health and safety, incidental repair, and ancillary materials/measures.

## V.8 Program Management

### V.8.1 Overview and Organization

The division of WVDO in which the WV WAP – in addition to the other programs listed in the paragraph below operates is the West Virginia Community Advancement and Development (WVCAD). WVDO is an agency under the West Virginia Department of Commerce.

The WV WAP is overseen by the WVCAD Director. The WVCAD division's programs and functions are subdivided among four (4) units/groups – *Sustainability, Infrastructure, Compliance, and Resiliency*. The *Compliance Unit* provides the monitoring functions of several programs contained in the other three (3) units, including the monitoring functions of the WV WAP. An organizational chart of WVCAD is provided as an attachment.

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The WV WAP is not responsible for the State Energy Program, which is administered by the West Virginia Division of Energy (WVDOE). WVDOE is also a division under the West Virginia Department of Commerce.

### **V.8.2 Administrative Expenditure Limits**

Sec. 1011(g) of the Energy Act of 2020 (Division Z of P.L. 116-260) includes language that will amend 42 U.S. Code § 6865(a)(1) language on administrative funds. Previously, the administrative cost category was limited to 10 percent (10%) of the grant and will now be increased to 15 percent (15%).

Not more than an amount equal to 15 percent (15%) of any grant made by the Secretary under this part may be used for administrative purposes in carrying out duties under this part, except that not more than one-half of such amount may be used by any State for such purposes, and a State may provide in the plan adopted pursuant to subsection (b) for recipients of grants of less than \$350,000 to use up to an additional 5 percent (5%) of such grant for administration if the State has determined that such recipient requires such additional amount to implement effectively the administrative requirements established by the Secretary pursuant to this part.

WVDO will budget no more than 7.5 percent (7.5%) for Administration. Subrecipients will receive no less than 7.5 percent (7.5%) percent for Administration. Any administrative funds not used by the WVDO will be moved to the subrecipients.

The State Plan includes a redistribution provision to enable the Grantee to actively manage the grant and move funds as necessary to fully expend the monies during the budget period which could include moving funds between subrecipients. All budget alterations or revisions will be in accordance with all other applicable Federal rules and regulations.

A separate budget category is permitted by DOE for financial audits. The cost of these audits was previously charged to the already over-burdened administrative cost category and sometimes resulted in financial audits of less than adequate quality. WVDO is providing relief to the subrecipients by allowing these charges to be covered by a separate category, if the subrecipients meet the threshold contained in 2 CFR 200. These costs will be actual costs of the weatherization portion of the audit.

### **V.8.3 Monitoring Activities**

#### **Introduction**

Monitoring is a systematic process of gathering and evaluating information, as well the physical visitation of sites, in order to support and assess the subrecipients and their programs in terms of performance, capacity, and compliance. WVDO monitors in accordance with applicable law, including regulations contained in 10 CFR part 440 specifically 10 CFR 440.23(a); 2 CFR 200 specifically 2 CFR 200.331, 2 CFR 910 and 45 CFR Part 75; DOE WPNs including DOE WPN 15-4, and WPN 16-4, and other policies and procedures that DOE may issue. The WV WAP Monitoring Plan will include the following areas:

#### **Approach:**

WVDO will conduct a monitoring of each subrecipient at least once a year, provide a written report to the subrecipient, and maintain both electronic and physical files related to monitoring which are accessible to DOE during its monitoring visits. The monitoring tools utilized by WVDO are based off tools and templates provided by DOE through *WPN 16-4 Updated Weatherization Assistance Program Monitoring Guidance* and *WAP Memorandum 015 - Weatherization Financial Toolkit – 2 CFR 200 Regulations and Procurement Procedures*. WVDO has revised monitoring tools and forms to reflect the updated guidance as well as WV WAP SWS references. WVDO has also developed a monitoring module of the database management system to be used for formation of monitoring reports, QIPs, and other monitoring process aspects.

WVDO will also conduct periodic off-site, desktop monitoring utilizing the data management system used to track all weatherization work, at times coupled with the statistical management tool and related analytical spreadsheets used to track production, expenditures, and other performance indicators. This process will serve as a pre-monitoring activity as well as routine review and oversight as needed.

The monitoring performed by WVDO will be broken down into three (3) components which may be performed at different times if necessary and may have differing frequency depending on quality of subrecipient performance in each focus area. The monitoring will include the following focus areas and details:



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**Programmatic and Management Monitoring:**

- Subrecipient Production Analysis and Review (ensuring benchmark and yearly goal completion)
- Financial/Administrative Components
- Inventory (Equipment and Materials)
- Warehouse
- Rolling Stock
- Eligibility processes and compliance
- "Reweatherization" compliance
- Compliance with all WVDO mandated forms, processes, and policies
- Database management system usage and reporting
- Reporting and funding requests
- Client Files and related documentation
- Health & Safety Components (Safety meetings/Lead Safe Work [LSW] Practices, documentation/Warehouse & Vehicle Safety/Health and Safety percentage)
- Energy Education
- Training & Technical Assistance
- Procurement Practices
- Client Prioritization methods
- Utility (leveraged) fund usage, documentation, and reporting
- Insurance coverage
- Subrecipient personnel qualifications/certifications and associated work performed
- Subrecipient internal corrective action procedures (for reduction of findings)

**Field/Technical Monitoring:**

- Program Overview (Client File Review, Work Orders, Documentation of measures, etc.)
  - Compliance with all WVDO mandated field/technical forms, processes, and policies (ex: Quality Control Inspection form and process)
  - Rental unit/Multifamily documentation and process compliance
- Energy Audits (Process and Documentation - Weatherization Assistant Audit Program Libraries, inputs/usage, adherence to guidance, etc.)
- Weatherization of Units (all work performed on dwellings – HVAC, shell measures including insulation and air sealing, baseload measures, etc.)
- Zonal and Pressure Diagnostics on all dwelling types
- Health & Safety (HVAC, LSW compliance, ASHRAE 62.2 2016 ventilation requirements, mold/moisture, electrical, etc.)
- Final Inspections/Quality Control process and documentation
- Client interaction and client education process

Field monitors will utilize DBA FACS Pro as the monitoring tool. DBA FACS Pro is programmed to randomly pull clients to increase transparency for monitoring visits through the Monitoring/Training Module.

**Fiscal Monitoring:**

- Financial Policies and Procedures
- Cash Management
- Procurement policies and practices
- Financial management of Material Inventory
- Financial management of Property and Equipment
- Contracts/Sub-awards
- Payables/Receivables/Expenses Management
- Invoicing and Reporting accuracy
- Review of Funding Requests and specific line items/expenses for accuracy and proper documentation
- Bank records and reconciliation
- Financial Statements
- Internal Controls
- Financial Management of utility (leveraged) funds
- Single Audits (See A-133 Financial Audits (2 CFR 200 Subpart F))

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**A-133 Financial Audits (2 CFR 200 Subpart F):**

WVDO will verify when the audit was submitted to the Federal Clearinghouse (FAC), and note this on the "Annual Audit Chart," maintained by the WVDO Fiscal Compliance Monitor. If the subrecipient did not submit the audit to the FAC by the deadline as per Federal regulations, WVDO mails a reminder letter to the subrecipient.

The WVDO Fiscal Compliance Monitor will review all audits using the "WVDO Pass-through entity Audit Review Checklist." An "Audit Review Summary" is completed for the audit, and maintained on WVDO's shared drive. Depending on the results of the review, WVDO forwards to the subrecipient either (1) a letter indicating no findings, or (2) a letter requesting a Corrective Action Plan (CAP). The subrecipient has six (6) weeks to submit a CAP if applicable.

If a subrecipient has not submitted the CAP within the deadline, the CAP "Reminder E-mail" will be forwarded to the Executive Director. Upon receipt of the CAP, WVDO will review and forward to the subrecipient either the (1) "CAP Acceptance E-mail" or (2) another correspondence requesting modification to the CAP. As per 2 CFR 200, as a Pass-through entity, WVDO is required to follow-up/issue a management decision for Federal award findings related to the programs WVDO administers.

Currently, all WAP subrecipients expend more than \$750,000 in Federal funds in a fiscal year and thus are required to have a Single Audit.

**Desk-Top Review Schedule:**

Desk-top review will be performed on a quarterly basis. Desk-top monitoring will be conducted through the DBA FACS Pro Monitoring/Training Module. Field Monitors will choose a single item to review. Examples of desk-top review items include: Deferrals, QCI Form completion, Income verification, etc. Jobs will be chosen at random by the DBA FACS Pro Monitoring Module and the reviewing monitor(s) will be on a rotating quarterly basis.

Subrecipients will receive e-mail notification once the desk-top review has been completed. The notification will have instructions on how to respond to the monitoring. The individual issues will be addressed per subrecipient with required actions for compliance if applicable.

**Monitoring Staff:**

Monitoring will be performed by several WVDO staff members with credentials and areas of expertise to effectively monitor all the various components of the WV WAP as outlined above. Monitoring staff members may monitor more than one (1) component. The monitoring process and the different components are managed and overseen by a Compliance Manager. The WV WAP Manager reviews and approves each report. The current WVDO monitors are as follows:

*Programmatic and Management Monitors (Administrative Monitors):*

- 1 Weatherization Assistance Program Manager
- 1 Weatherization Assistant Administrator

**Qualifications:** The qualifications of the Programmatic and Management Monitors (Administrative Monitors) include extensive experience with the weatherization program (both at the Pass-through entity level and subrecipient level) as well as certifications and education that benefit the monitoring team as they oversee and evaluate the subrecipient management of the weatherization program. The staff members have experience in management and finance/accounting.

*Field Monitors (Technical Monitors):*

- 2 Weatherization Specialists (Field/Technical)
- 1 Weatherization Specialist (Field/Technical – In Training)

**Qualifications:** The qualifications of the Field Monitors (Technical Monitors) include extensive experience with the weatherization program as well as extensive building science knowledge. The Field/Technical monitors have several BPI certifications (including HEP QCI), Weatherization Assistant Training Certificate, as well as multiple WV WAP specific certifications that are now superseded by HEP or other state/national certifications, but still provide a strong foundation of knowledge; (Energy Auditor, Quality Control Inspector, multiple HVAC certifications) as well as attendance to regional and national energy conferences. The Field Monitor in training is currently attending trainings at Community Housing Partners (CHP) in Christiansburg, VA, to prepare for Energy Auditor and Quality Control Inspector Certification testing. This individual is currently attending subrecipient Field/Technical monitorings as an observer.

*Fiscal/Financial Monitors:*

- 1 Weatherization Assistance Program Assistant Manager

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- 1 Compliance Unit Manager

**Qualifications:** The qualifications of the Fiscal/Financial Monitors include education (bachelor's and master's level) and experience in the accounting, finance, and management fields, as well as knowledge of Federal financial requirements. Some of the monitoring staff experience is specifically with the Weatherization Assistance Program both on the Pass-through entity and subrecipient levels. The Fiscal/Financial monitors will also utilize WVDO's Chief Financial Officer (CFO) and experienced accounting staff as additional resources during the monitoring activities as needed.

WVDO staff have received multiple 2 CFR 200 Uniform Guidance trainings over the past several years. In Program Year 2021 the Weatherization Program Manager and Weatherization Assistant Administrator will attend a refresher 2 CFR 200 OMB Uniform Guidance training. WVDO will continue to seek additional training on the new regulations if/when necessary. WVDO will pursue additional certifications as identified and/or needed as the Program Year progresses.

**Monitoring Expenditures:**

Monitoring staff members will be paid out of the Training and Technical Assistance (T&TA) budget category with the exception of the Fiscal Monitor and WAP Manager who will be paid out of the Administrative budget category given the nature of their work in relationship to the organization and other programs they work within. A percentage of the Fiscal Monitor will be paid out of the T&TA budget category. WVDO has budgeted \$26,000 out of DOE funds for travel expenses related to monitoring activities. These funds will be supplemented by LIHEAP funds.

**Monitoring Schedule:**

The monitoring schedule will follow a basic plan of one (1) or two (2) Programmatic, Field, and Fiscal monitoring visits performed per month for the eleven (11) subrecipients. This varies throughout the year due to when WVDO starts the monitoring process for the Program Year. In coordinating the monitoring schedule WVDO also considering holidays, subrecipient leave time, etc.; therefore, some months have one (1) visit, and some have two (2).

WVDO will strive to set the monitoring schedule for the Program Year within the first quarter (July-September) of the DOE grant cycle. WVDO will disseminate a preliminary schedule to the Weatherization Network and ask subrecipients to confirm the proposed monitoring dates for their organization or ask for different dates if conflicts exist.

If conflicts arise after the final monitoring schedule is set for the Program Year, WVDO asks that subrecipients inform WVDO as soon as possible. At a minimum, subrecipients must notify WVDO within 48 hours of the receipt of the official monitoring notification.

WVDO avoids scheduling visits during back-to-back weeks when possible so that WVDO monitoring staff can work to finalize reports and adequately prepare for the next visit. This plan is only tentative as visits to a subrecipient could increase if there are serious deficiencies identified. The scheduling of the subrecipients will depend in part on when their last visit occurred as well as reasonably taking into consideration geographic location and time of the year. Also, any subrecipients that had major or repeated findings identified from the PY 2020 – 2021 monitoring process and have not had a follow-up visit (due to findings being identified toward the end of PY 2020 – 2021) will be first priority in PY 2021 – 2022, with additional reviews scheduled as necessary until deficiencies are corrected.

**Pre-Monitoring Procedures**

WVDO will provide timely notification of monitoring to subrecipients and complete some parts of the monitoring prior to arriving onsite for monitoring. Those activities include:

- Distribution of official notifications of monitoring at least thirty (30) days prior to on-site monitoring by e-mail to Executive Director/CEO, CFO/Finance Director, and WAP Coordinator. Official notifications will direct the subrecipient how to prepare for the review and WVDO's expectations. The subrecipient should confirm receipt of the notification and respond within 48 hours if the dates for monitoring need to be changed for any reason.
- During the week before the scheduled on-site visit, the WVDO monitoring team will confirm arrival times and arrange any necessary logistics.
- An assigned field/technical monitor will contact the subrecipient with a job monitoring pool to schedule jobs to be monitored at least one (1) week prior to on-site monitoring.
- Monitors will conduct desk-top reviews of relevant information to increase efficiency on-site.

**Visit**

A typical visit can be expected to require three (3) to five (5) days on-site. The on-site visit process will include the following:

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- An entrance interview during which any concerns or questions about the review can be discussed between WVDO and subrecipient staff.
- Requests of documentation for review including, but not limited to, subrecipient policies and procedures, program documents, client files, and financial records.
- Conducting interviews with program staff regarding program operations and job functions.
- Conducting interviews with administrative and fiscal staff.
- Inspecting completed weatherized dwelling units.
- Inspecting Weatherization assets including but not limited to warehouse(s), material inventory, tools, equipment, and vehicles.
- Offering a daily update to the subrecipient regarding the progress of the review and issues that have already been found.

The staffing and credential make up of a subrecipient will determine the number of completed dwelling units needing to be visited by WVDO as per DOE WPN 15-4. For subrecipients that have an independent QCI, WVDO will monitor at least five percent (5%) of completed dwelling units. For subrecipients that have an Auditor that also performs the functions of QCI, WVDO will monitor at least ten percent (10%) of completed dwelling units. This percentage will increase based on issues identified and/or capacity of WVDO staff. WVDO will also review units "in progress" beyond the five (5) or ten (10) percent completed units respectively, in order to assess: quality and compliance; appropriate and allowable materials; appropriateness and accuracy of energy audits; final inspections; safe work practices, such as lead safe weatherization protocols; and other factors that are relevant to on-site work.

Upon the completion of each monitoring visit of any of the three (3) components, an Exit Conference is held between the members of the subrecipient (as selected by the subrecipient management) and the monitoring staff to discuss strengths, weaknesses, findings, call-backs, and monitor recommendations. As per DOE WPN 16-4, within thirty (30) days after each visit, WVDO will prepare a written report for the subrecipient that describes the current monitoring assessment (identification any findings, recommendations, commendations, and best practices) and any corrective actions as part of a QIP, if applicable. A subrecipient typically has thirty (30) days to respond with a QIP unless the nature and severity of findings deem a more expedient response. If the subrecipient does not respond within the required time limit, the subrecipient is notified and disciplinary or punitive actions may be taken if the subrecipient does not comply with the requirement to submit a QIP.

**Process of Corrective Action, Discipline and/or Removal of a Subrecipient from the WAP**

WVDO has a system in place to review each QIP provided by the subrecipients either approving of the plans made or requiring additional information or actions. Regardless of monitoring focus, WVDO follows up with each subrecipient to ensure that the corrective actions outlined in the plan have been implemented either through a subsequent monitoring visit and/or desk-top review, or requiring the submission of documentation confirming the corrections. WVDO will offer and provide training and technical assistance if requested and appropriate response to a QIP. If a subrecipient's response is to contest an identified deficiency, WVDO will either sustain or revise its initial finding and provide additional guidance or instructions.

WVDO increases visits (both the number of units reviewed and the frequency of monitoring visits) to the subrecipient until it can be assured findings are resolved. If necessary, WVDO has implemented a system of monitoring every potential job prior to submission as a completion for a subrecipient if sustained compliance cannot be demonstrated. If significant findings are discovered, such as health and safety violations, poor quality installation of materials, major measures missed, then the subrecipient must take appropriate corrective action(s) to resolve the outstanding issues in a timely manner. If health and safety issues are found that present an immediate danger to people in the home, the subrecipient must immediately resolve the issues.

If subrecipient noncompliance or repeated unresolved findings (based on a minimum of two (2) monitoring visits at a subrecipient) will be reported to the DOE Project Officer. Sensitive or significant noncompliance findings, such as waste, fraud, or abuse must be reported to DOE immediately by WVDO.

Once the findings are corrected and procedures are put in place to prevent reoccurrence, WVDO will resume the original percentage sampling of that particular subrecipient's work in subsequent monitoring visits.

If repeated monitoring and technical assistance do not correct identified noncompliance issues or if a subrecipient continuously fails to respond to an identified finding, WVDO will begin the process of disciplinary action which will include the imposition of additional requirements. Subrecipients will be informed of the nature of additional requirements, the reason why additional requirements are being imposed, the actions needed to remove the additional requirement, and the time allowed for completing the actions, if applicable.

Depending on the type of noncompliance issues, actions and additional requirements may include but are not necessarily limited to:

- Withholding disbursement of grant funds until noncompliance issues are corrected
- Disallowing completions that do not meet program standards
- Placing the subrecipient on an "At Risk" status

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- Suspending part or all of the program for the subrecipient
- Asking the subrecipient to voluntarily relinquish the program
- Removing part or all of the program from the subrecipient
- Requiring payments as reimbursement rather than advance payments
- Requiring all weatherized dwelling units to be inspected by a third party before being turned in for completions
- Requiring additional, more detailed reporting
- Establishing additional prior approvals

Once the noncompliance issue that caused WVDO to take disciplinary action and impose additional requirements is resolved, WVDO will promptly remove the additional requirements. The subrecipient will be notified of the removal in writing.

If a subrecipient wishes for WVDO to reconsider the imposition of additional requirements, the subrecipient must provide in writing within two (2) weeks of being informed of additional requirements the following:

- Detailed reason why WVDO should reconsider imposing additional requirements
- Evidence that the issue of noncompliance has been satisfactorily resolved
- A plan to prevent similar issues of noncompliance going forward

Within thirty (30) days of receiving the above information from a subrecipient, WVDO will either sustain or remove the additional conditions and disciplinary actions imposed.

#### **WAP Grant Award Termination**

If WVDO determines that all remedies for noncompliance and training and technical assistance opportunities have been exhausted in an effort to correct an issue of noncompliance, or definitive waste, fraud, or abuse were uncovered during the course of monitoring, the subrecipient's WAP grant awards will be terminated. WVDO will provide the subrecipient with written notification of termination and cause of termination.

If a subrecipient wishes to contest a termination action, they must provide WVDO with information and documentation showing that the cause of termination had been remedied or conditions as understood by WVDO that caused the termination were not accurate within one (1) week of being informed of the termination action. WVDO will respond in thirty (30) days either sustaining or reversing the termination action.

#### **Tracking & Analysis**

The subrecipient monitoring process from notification to final approval and confirmation of corrective actions is tracked by WVDO to final resolution in a "Monitoring Log." WVDO also tracks the most significant deficiencies in a "Root Cause Analysis" spreadsheet to evaluate and analyze trends of the subrecipients' performance. This process allows for the identification of training and technical assistance needs and is an evaluative tool used to keep both WVDO and the subrecipients on a path of continuous improvement.

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

Training & Technical Assistance (T&TA) funding is used to pay salary, travel, and operational costs for WVDO staff to provide monitoring/T&TA to subrecipients. Subrecipient expenses for participation in T&TA activities (including special conference attendance) will be funded from DOE T&TA and/or other funds including LIHEAP. T&TA activities are intended to maintain or increase the efficiency, quality, and effectiveness of the WAP at all levels and are designed to maximize energy savings, minimize production costs, improve program management and field "quality of work," and/or reduce the potential for waste, fraud, abuse, and mismanagement.

WVDO assesses training needs regularly as part a constant process as the PY progresses. This process and the related training plan are flexible and WVDO incorporates information from the process into the training plan as needed. WVDO assesses T&TA needs of its subrecipients through these avenues:

- WVDO monitoring efforts
- Internal trend analysis
- Training Needs Assessment Surveys
- Prompts in subrecipient grant applications
- Communication with national experts regarding new technologies and/or standards/practices
- Communications with DOE Project Officer



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- Guidance as provided by the Department of Energy (DOE) including industry-wide initiatives and future program requirements (certifications, health and safety implementation, etc.)
- Monitoring visits from the DOE Project Officer, DOE contracted representatives, or the Office of Inspector General

**Overview**

The WV WAP supports subrecipients seeking appropriate trainings pursuant to achieving required certifications and to enhancing their credentials and skill in work practices associated with weatherization work. Trainings and certifications have and will continue to be provided by Interstate Renewable Energy Council (IREC) accredited and certified Weatherization Training Centers (WTCs) within close proximity to West Virginia. The WV WAP is prohibited from encouraging subrecipients to choose one (1) vendor among equivalent potential vendors. Therefore, the emphasis in helping subrecipients to plan trainings will be in providing timely notifications of training opportunities offered by a variety of relevant entities; asking subrecipients to choose the providers whom they deem will best meet their training needs; and then helping subrecipients to schedule trainings which meet them.

Subrecipients will submit a detailed Training Request Form for each desired training/certification/examination, etc. The submitted request is reviewed for accuracy, costs, training center accreditation, i.e., Interstate Renewable Energy Council (IREC) Weatherization Training Centers (WTCs). With no IREC accredited training centers in West Virginia, subrecipients typically go to the Community Housing Partners (CDP) in Christiansburg, VA, or the Corporation for Ohio Appalachian Development (COAD), in Athens, OH. Both training facilities are IREC accredited. Those Training Requests submitted with other training centers/providers listed (usually Online trainings) are researched by the training staff to ensure IREC accreditation before requests are approved. These requests are denied and returned with direction for the subrecipient to locate and use only accredited facilities.

Training and certification will continue to be offered to the Weatherization Network in PY 2021 – 2022 for recertifications as well as for additional staff. Training priorities have been identified in concert with subrecipients via several mechanisms as bulleted above. In particular, the WV WAP is paying attention to subrecipient needs for HEP Energy Auditor (EA) and Quality Control Inspector (QCI) certification and recertifications, and CEUs as the program enters PY 2021 – 2022.

**Other major areas of focus this Program Year:** In addition to the effort at training, certifying and recertifying EAs and QCIs as described above, there are several other planned areas of focus for training and credentialing subrecipient staff. Four (4) other areas of first priority include: (1) Ensuring subrecipient Electrical Licenses remain current; (2) Providing continued guidance on the ASHRAE 62.2-2016; (3) Providing guidance on the revised WV WAP Standard Work Specifications (WV WAP SWS) functioning as the West Virginia Weatherization Standards/Field Guide, changes and updates; and (4) Keeping up Lead Renovator Certifications and Lead Renovator Refresher Certifications.

**Descriptions:**

HEP QCI/HEP EA

As of May 1, 2020, all program personnel (Pass-through entity and subrecipient) performing inspections on completed dwelling units were HEP QCI Certified. All eleven (11) subrecipient weatherization providers have at least one (1) HEP QCI Certified staff, and several had more than one (1).

WVDO continues to assist in the coordination and funding of the HEP EA certification given the and recertification provided in DOE WAP Memorandum 036 released May 16, 2018. WVDO will also fund opportunities during PY 2020 – 2021 for Pass-through entity and subrecipient staff to retain their current HEP certifications by obtaining Continuing Education Units (CEUs).

ASHRAE 62.2-2016

The WV WAP will seek appropriate resources for providing this training to subrecipients, as well as review monitoring reports to determine which subrecipients may need additional targeted assistance in implementing ASHRAE 62.2-2016 standards.

DOE has adopted ASHRAE 62.2-2016 as its ongoing standard, however, WVDO recognizes the standard has been updated to ASHRAE 62.2.-2016. If during the program year DOE mandates, the newer standard be implemented, training will be provided to WVDO and subrecipient staff.

Lead Renovator and Lead Renovator Refresher Certifications

In order to become a certified lead renovator, subrecipient staff must complete training from an EPA-accredited training provider. These trainings were developed to educate professionals in home and other fields about the lead safe work standards contained in U.S.C. 2681 et seq., and 40 CFR 745.80 et seq., and the EPA 2008 Lead-Based Paint Renovation, Repair and Painting (RRP) Rule (amended in 2010 and 2011).

Recertification is required every three (3) years online and every five (5) years in person. Currently, the WV WAP requires that each subrecipient have at least one EPA Lead Renovator certified staff person. All eleven (11) subrecipients have certified lead renovators on staff. Several subrecipients have identified these

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trainings as priorities for PY 2020 – 2021.

State Weatherization Standards

WVDO hired the Community Housing Partners Energy Solutions Training Center (CHP) to update the WV Single Family and Manufactured Field Guide Instruction Manuals. Once received and approved by DOE, WVDO will coordinate trainings with CHP to provide instruction to subrecipient WAP crews. These trainings will take place either in person or virtually.

Until final approval from DOE, WVDO and WV WAP subrecipients will continue to work under the current WV WAP SWS for Single Family Site Built and Manufactured Housing.

WVDO will document the verification of receipt and usage of the WV WAP SWS by the subrecipient as required by DOE WPN 15-4, using the subrecipient WAP Grant Agreements.

Electrician License

WVDO will approve the purchase of relevant study materials and online training courses for state mandated electrical licenses. Apprentice, Journeyman, Master and specialty licenses are required to perform certain weatherization tasks. The requirements for each of these levels vary and can be reviewed at

<https://firemarshal.wv.gov/Divisions/Fire%20Services/Pages/Electrical-Licensing.aspx>.

HVAC Technician Certification Class 1:

As of January 1, 2016, all individuals working on heating systems were required to have a HVAC Technician License from the West Virginia Commissioner of Labor. Individuals in West Virginia who engage in the business of installing, erecting, testing, repairing, servicing or altering heating, ventilating and air conditioning equipment or systems to heat, cool or ventilate residential structures, are required to have an HVAC Technician License when the project exceeds \$1,000.

Those individuals who do not have the required hours can register as an HVAC Technician in Training. Subrecipients must have a 1:1 ratio of Certified HVAC Technicians to Technicians in Training Class 2. Once a Technician in Training has the required hours, unless she/he is still within the opting out phase, the individual must pass the HVAC exam.

HVAC certifications are renewed every year through the West Virginia Commissioner of Labor. Since September 30, 2016, it is mandated that HVAC work cannot be performed by subrecipient staff who do not have the proper West Virginia HVAC Technician or Technician in Training certification.

Certification will continue throughout the PY 2021 – 2022 as new HVAC Technicians in Training Class 2 are hired, and current ones become eligible to apply for HVAC Technician Class 1.

Client Education

Each subrecipient has identified at least one (1) Energy Educator, several whose certifications have expired, however; various subrecipients have identified Client Education as a priority in PY 2021 – 2022. WVDO continues to work to recertify all Energy Educators through online training provided by an IREC-accredited WTC. This course is designed to assist the student in acquiring adult education skills to establish an effective means of communication between the Energy Educator and the client. The online Client Education course prepares students to develop a strategy for effective client education from pre-approval to quality assurance. Videos and documents are presented to use with clients to ensure that they get the information they need during the client education process. After each topic is presented, a short self-quiz follows each section and feedback is given. A final test consisting of a single multiple choice-true/false exam is given at the end of the course. For certification, the student must pass this final exam. After passing the certification test, the Energy Educator will work with clients to effect change in poor energy conservation habits.

**Approach**

In PY 2021 – 2022, WVDO continues the “as needed, per person” approach as subrecipients anticipate hiring new staff throughout the year; as current certifications and licenses expire at different times throughout the year; and as subrecipients demonstrate and express different specific deficiencies and needs for improvement.

WVDO will make available trainings to the Weatherization Network during the entire year. Subrecipients have requested more flexibility in scheduling training when needed in order to better accommodate production. Instead of a series of set classes, which sometimes takes crews away from production for longer periods that may burden an organization, subrecipients will have the ability to fit trainings into their respective schedules. WVDO will set time frames for completions of required certifications for subrecipients to continue operating the WV WAP and to ensure that subrecipients plan and meet expectations during

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the year.

The time frames are determined by the licensing/certifying agency, e.g., BPI, West Virginia Fire Marshall, etc. For Comprehensive trainings including Energy Auditor (EA) and Quality Control Inspector, WVDO requires recertification **every three (3) years**. Continuing Education Units (CEUs) are required and WVDO reviews and approves submitted Training Requests for EAs and QCIs to maintain their credentials. For other weatherization staff, including Crew Leaders and Retrofit Installers, WVDO requires a **five (5) year** cycle for retaking required courses. WVDO does allow for refresher courses to be taken, **IF** the subrecipient determines additional training is needed to address work/installation processes, work quality, or other issues that develop during the Program Year.

WVDO also tracks all required licenses needed by subrecipients to properly perform work within the WV WAP (West Virginia HVAC Electrician License, West Virginia Single Family Dwelling Electrician License, EPA Section 608 Refrigerant Transition Technician Certification, HVAC Contractor License, etc.) and WVDO will ensure that all subrecipients remain current with all WV WAP required licenses.

Tracking for licenses, credentials, certifications, etc., is completed through desk top monitorings and during the annual onsite subrecipient staff. WVDO provides each subrecipient with a detailed Programmatic report, which includes a section (Qualifications and Training) that has the specific license/certification listed with the Expiration Date, e.g., Energy Auditor, Electrical License – Single Family, Electrical License – HVAC, West Virginia HVAC Technician License, EPA Section 608 Refrigerant, Quality Control Inspector, and Client Educator. The Environmental Protection Agency certification to complete Lead Safe Work is also reviewed and the Certification number is noted in the Report. Certified Lead renovators are listed by name, expiration date, and certification number.

Attendance for all trainings is mandatory for the appropriate program personnel unless extenuating circumstances exist, and approval is received from WVDO.

WVDO provides T&TA funds to each subrecipient in a separate DOE Subgrant Award and reimburses training expenses based upon an approved Training Request form. The Award amount is determined by subrecipient training need(s) provided in the DOE Grant Application, and past training performance, i.e., some subrecipients only use the minimum amount to maintain certifications and credentials, while others typically attend DOE approved National Training Conferences.

Throughout the Grant Year, WVDO has direct discussions between the WV WAP staff and subrecipient Weatherization Coordinators to assess training needs. Spending is tracked by monthly submitted Invoices and Monthly Expenditure Reports (MERs). All requests for training from subrecipients will be submitted utilizing the WVDO “Subrecipient Training Request Form.” The form is currently reviewed by the WVDO Weatherization Manager, and if approved assigned an Item ID number. This number is used on the Monthly Invoice to track approved and completed trainings.

As mentioned, subrecipients are required to submit a list designated by quarters of any anticipated WAP-related T&TA needed to meet standards as part of the 2021 – 2022 Grant Application process. This list will ensure at the beginning of the Program Year that an estimated needs list is captured for the subrecipient for proper planning throughout the year.

**Training Timeline for PY 2021 – 2022**

As has been the practice for several program years, WVDO will continue to pursue an “as needed, per person” approach as subrecipients anticipate hiring new staff throughout the year, and as current certifications and licenses expire at different times during the year.

WVDO will make available trainings to the weatherization network during the entire year, utilizing WTCs and other sources. These trainings/certification and renewals are:

- HEP BPI Quality Control Inspector
- HEP BPI Energy Auditor
- HEP BPI Retrofit Installer/Technician
- HEP BPI Crew Leader
- Initial Lead Renovator Certification
- Lead Renovator Refresher Recertification
- EPA section 608 Training
- ASHRAE 62.2-2016
- NREL/BPI and WV WAP SWS
- HEP CEUs
- Healthy Homes Specialist CEUs/Recertification
- DBA FACS Pro App

Trainings are available throughout the PY, but there is still a need for benchmarks, assessment, and adjustments, to ensure that subrecipients are receiving the necessary training/certifications to operate a weatherization program. Records of trainings, certifications, and licenses are kept in the data management system

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and supplemented with the information from the *Training Event Status Tracking Log*. The WV WAP staff intend to make a concerted effort to engage in direct conversations with subrecipients to determine and adjust training needs throughout the Program Year.

During the First Quarter of the Program Year, a combination of funding will be utilized for T&TA. DOE funding will be used; however, LIHEAP funding will also be used for training costs, as approved by West Virginia DHHR, West Virginia's LIHEAP Grantee. The combination funding will support the trainings listed above and these additional trainings:

**First Quarter – July 1 through September 30, 2021**

- HEP BPI Quality Control Inspector Recertification
- HEP BPI QCI CEUs (CAZ, Duct testing)
- HEP BPI Energy Auditor Certification/ Recertification
- HEP EA CEUs (i.e., Building Analyst)
- DBA FACS Pro App
- ASHRAE 62.2-2016
- Lead Renovator Certification
- Lead Renovator Refresher Recertification
- NREL/BPI and WV WAP SWS
- HVAC Technician Class 1
- HVAC Technician in Training Class 2
  
- WV WAP State Plan PY 2021 – 2022 Meeting
- Weatherization Assistant 8.9/10 software for NEAT/MHEA

**Second Quarter & Third Quarter – October 1 through December 31, 2021 & January 1 through March 31, 2022\***

- Energy Educator
- Continued training on DBA FACS Pro App
- HEP BPI Energy Auditor Certification/ Recertification
- New Hire Requirements
- Retrofit Installer/Technician
- West Virginia HVAC Electrician License
- West Virginia Single Family Dwelling Electrician License
- West Virginia Journeyman's Electrician License
- West Virginia Apprentice Electrician License
- Heating Unit Inspection
- Respirator Fit testing
- Healthy Homes Specialist CEUs/Recertification

\*An assessment of the success of Quarter 1 training, regarding scheduling and implementation efforts will determine the objectives for Quarters 2 & 3.

**Fourth Quarter – April 1 through June 30, 2022**

The Final Quarter activities will continue with trainings and certifications on an as-needed, per person/subrecipient basis.

**Credentials/Certifications/Licenses**

WVDO Weatherization Specialists must maintain proficiency on new methods and techniques pertinent to the WAP. WVDO Weatherization Specialist staff must maintain levels of knowledge aligned with the Weatherization industry as well as State and National Standards and are also furnished with all State and Federal regulations as they are updated and released. At this time, two (2) WVDO Weatherization Field Specialists are currently certified as HEP QCIs and BPI Certified with Building Analyst and Envelope Professional certifications as well. The third WVDO Weatherization Field Specialist on staff is expected to have the necessary credentials to take the EA and QCI certification examinations during the 2021 – 2022 Program Year.

The following are the current defined WV WAP certifications:

1. HEP EA Certification
2. HEP QCI Certification
3. Energy (Client) Educator Certification
4. Environmental Protection Agency (EPA) Accredited Lead Renovator Certification (and Recertification as applicable)



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**5. HVAC Technician Certification**

The following certifications are under consideration as requirements in the future for the respective weatherization staff positions in addition to the certifications listed above:

1. HEP Retrofit Installer Technician Certification
2. HEP Crew Leader Certification

In addition to the HEP-level certifications and other required certifications, the WV WAP will periodically coordinate licensing testing through the West Virginia Fire Marshal's Office, the West Virginia Contractors Licensing Board, as well as EPA certification testing venues for the following:

1. West Virginia HVAC Electrician License
2. West Virginia Single Family Dwelling Electrician License
3. West Virginia Journeyman's Electrician License
4. West Virginia Apprentice Electrician License
5. EPA Section 608 Refrigerant Transition Technician Certification
6. HVAC Technician License
7. HVAC Technician in Training License

All weatherization programs must also have a West Virginia Residential Contractors License at the subrecipient level, obtained through the West Virginia Contractors Licensing Board.

Special projects are constantly being undertaken to ensure that the WV WAP keeps up with state-of-the-art energy conservation and management techniques. The following are additional trainings that will be offered throughout the year as needed, several having already been discussed earlier as priorities for PY 2021 – 2022, especially with regards to the implementation of the *WV WAP Health and Safety Plan*:

1. ASHRAE 62.2 -2016
2. Combustion Appliance Zone (CAZ) Training
3. Lead Safe Work Practices Training
4. OSHA Confined Spaces in Construction Standard Course
5. Healthy Homes
6. Weatherization Assistant Training
7. Duct Blaster
8. Infrared Camera Training
9. Database Management Training
10. Utility Program Training
11. Administrative/Programmatic/Financial Training
12. WV WAP Policy and Procedure Training

Non-compliance with regards to any mandatory training without the written approval from WVDO due to extenuating circumstances could result in a subrecipient not able to perform certain functions with their staff until the requirements are met.

**Weatherization Assistant (WA v.10) Suite**

Per DOE Memorandum 074, WVDO will begin Grantee and Subgrantee training to transition to the web-based WA v.10 during Program Year 2021 to meet the final transition date of July 1, 2022. The WVDO Field/Technical and training staff will work DOE, IREC accredited training centers, and the Oak Ridge National Laboratory (ORNL) to coordinate meetings, trainings, and other opportunities for WVDO and Subgrantee participation. The dates for these opportunities are to be determined (TBD).

**Technical Assistance**

The WV WAP will continue to utilize the traditional approaches of on-site program, administrative, fiscal, and in-field technical assistance based on monitoring findings and/or needs of particular subrecipients. T&TA activities are intended to maintain or increase the efficiency, quality and effectiveness of the WAP at all levels. Activities will be designed to maximize energy savings, minimize production costs, improve program management and crew/contractor "quality of work," and/or reduce the potential for waste, fraud, abuse and mismanagement.

**Pass-through entity Assessment:**

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Training needs have been identified and are continuously evaluated. Field Monitors will attend trainings and conferences at regional and national levels commensurate to the job duties. Current WV WAP staff have likewise received ongoing relevant training.

In addition to training new hires, another top priority is to attend trainings to keep in compliance with any new DOE regulations or guidance and to assist subrecipients to do the same. After that is met, then trainings are scheduled by the greatest need, i.e., the number of subrecipients that need a particular training. At the same time, WVDO will evaluate how many HEP certifications have been obtained to be in compliance, and how many more could be obtained with available funding. WVDO assesses periodically both the needs of the subrecipients as well as funds that are available to meet those needs and will plan accordingly. WVDO also makes assessments at the end of a grant cycle (DOE or LIHEAP), evaluating the amounts budgeted for training during the previous grant cycle relative to what was provided, and comparing to anticipated training needs and funding available for the new grant cycle.

**Percent of overall trainings**

Comprehensive Trainings:	80.0
Specific Trainings:	20.0

**Breakdown of T&TA training budget**

Percent of budget allocated to Auditor/QCI trainings:	46.0
Percent of budget allocated to Crew/Installer trainings:	33.0
Percent of budget allocated to Management/Financial trainings:	21.0

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

**Energy Crisis**

The WV WAP utilizes LIHEAP WAP funds to operate the Energy Crisis Intervention Program (ECIP). The intent of ECIP is to provide emergency heat during the winter heating season. The program addresses non-operable or severely malfunctioning and unsafe heating systems. Any household that is eligible for WAP is eligible for ECIP services. Any household that receives the emergency heating system repairs or replacements from ECIP must apply for regular WAP services. ECIP provides emergency assistance within 48 hours to ensure the household will have heat. Weatherization services will be provided by the end of the program year, unless conditions exist that deems the dwelling ineligible for weatherization services at that time. During the LIHEAP Weatherization Application and Award process, the subrecipients are provided updated ECIP guidance.

**Disaster Response Plan**

The WV WAP Disaster Response Plan is addressed in *Section V.1.2 Approach to Determining Building Eligibility (#7)* and is in accordance with DOE WPN 12-7 *Disaster Planning and Relief* and all applicable Federal regulations.



# **West Virginia Weatherization Assistance Program**

**State of West Virginia  
Development Office**

## **PART III - BUDGET PY 2021**



**BUDGET INFORMATION - Non-Construction Programs**

1. Program/Project Identification No. EE0007958		2. Program/Project Title Weatherization Assistance Program	
3. Name and Address West Virginia Development Office 1900 Kanawha Blvd., East Charleston, WV 253050000		4. Program/Project Start Date 07/01/2021	5. Completion Date 06/30/2022

**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		\$ 0.00	\$ 0.00	\$ 3,784,308.00	\$ 0.00	\$ 3,784,308.00

**SECTION B - BUDGET CATEGORIES**

6. Object Class Categories	Grant Program, Function or Activity				Total (5)
	(1) HEALTH AND SAFETY	(2) LIABILITY INSURANCE	(3) FINANCIAL AUDITS	(4) LEVERAGING	
a. Personnel	\$ 0.00	\$ 0.00	\$ 0.00	\$ 7,122.00	\$ 162,498.00
b. Fringe Benefits	\$ 0.00	\$ 0.00	\$ 0.00	\$ 2,654.00	\$ 60,755.00
c. Travel	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 29,500.00
d. Equipment	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
e. Supplies	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 3,700.00
f. Contract	\$ 399,522.00	\$ 33,788.00	\$ 16,898.00	\$ 0.00	\$ 3,493,955.00
g. Construction	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
h. Other Direct Costs	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 33,900.00
i. Total Direct Charges	\$ 399,522.00	\$ 33,788.00	\$ 16,898.00	\$ 9,776.00	\$ 3,784,308.00
j. Indirect Costs	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
k. Totals	\$ 399,522.00	\$ 33,788.00	\$ 16,898.00	\$ 9,776.00	\$ 3,784,308.00
7. Program Income	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00



**BUDGET INFORMATION - Non-Construction Programs**

1. Program/Project Identification No. EE0007958		2. Program/Project Title Weatherization Assistance Program	
3. Name and Address West Virginia Development Office 1900 Kanawha Blvd., East Charleston, WV 253050000		4. Program/Project Start Date 07/01/2021	5. Completion Date 06/30/2022

**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. PY2020-21 DOE Annual Grant	81.042	\$ 0.00		\$ 3,784,308.00		\$ 3,784,308.00
2.						
3.						
4.						
5. TOTAL		\$ 0.00	\$ 0.00	\$ 3,784,308.00	\$ 0.00	\$ 3,784,308.00

**SECTION B - BUDGET CATEGORIES**

6. Object Class Categories	Grant Program, Function or Activity				Total (5)
	(1) GRANTEE ADMINISTRA TION	(2) SUBGRANTE E ADMINISTRA	(3) GRANTEE T&TA	(4) PROGRAM OPERATIONS	
a. Personnel	\$ 65,813.00	\$ 0.00	\$ 89,563.00	\$ 0.00	\$ 162,498.00
b. Fringe Benefits	\$ 24,549.00	\$ 0.00	\$ 33,552.00	\$ 0.00	\$ 60,755.00
c. Travel	\$ 3,500.00	\$ 0.00	\$ 26,000.00	\$ 0.00	\$ 29,500.00
d. Equipment	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
e. Supplies	\$ 1,400.00	\$ 0.00	\$ 2,300.00	\$ 0.00	\$ 3,700.00
f. Contract	\$ 0.00	\$ 265,267.00	\$ 115,000.00	\$ 2,663,480.00	\$ 3,493,955.00
g. Construction	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
h. Other Direct Costs	\$ 17,900.00	\$ 0.00	\$ 16,000.00	\$ 0.00	\$ 33,900.00
i. Total Direct Charges	\$ 113,162.00	\$ 265,267.00	\$ 282,415.00	\$ 2,663,480.00	\$ 3,784,308.00
j. Indirect Costs	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
k. Totals	\$ 113,162.00	\$ 265,267.00	\$ 282,415.00	\$ 2,663,480.00	\$ 3,784,308.00
7. Program Income	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00



# **West Virginia Weatherization Assistance Program**

**State of West Virginia  
Development Office**

## **PART IV - Health & Safety** **PY 2021**



## **1.0 – GENERAL INFORMATION**

The primary goal for the WV WAP is to implement cost-effective weatherization procedures to conserve energy and to assess and correct related health and safety hazards for the well-being of clients, their dwellings, and weatherization personnel.

With more advanced diagnostics and installation techniques utilized in the WV WAP, it is increasingly necessary to take steps to ensure that program measures do not cause or exacerbate health and safety problems for workers or clients.

Each home weatherized must be individually assessed to determine the existence of potential hazards to weatherization personnel or clients. When conditions within the home are such that the health and safety of the client, crew, or subcontractor will be jeopardized prior to providing assistance, weatherization must not proceed until such problems are remedied. In some cases, mitigation of problems may be beyond the scope of the Weatherization program. In these instances, the client must be notified in writing and referred to alternative resources for resolution of the problem.

In those instances where the existing conditions are perceived to pose a threat to the client, crew or contractor's health and safety, the WV WAP allows for deferral of weatherization work until the identified condition is made acceptable. The WV WAP Deferral Policy is described in *Section V.1.2 Approach to Determining Building Eligibility*.

## **2.0 – BUDGETING**

The WV WAP will budget Health and Safety in a separate category and thereby exclude such costs from the average unit cost calculations. This separate category will also allow these costs to be isolated from energy efficiency costs in program evaluation.

## **3.0 – HEALTH AND SAFETY EXPENDITURE LIMITS**

For the 2021 – 2022 Program Year, the West Virginia WAP would request to utilize up to **15 percent (15%)** of our 2021 – 2022 Program Operation funds for Health and Safety Expenditures. WV WAP uses its data management system to implement a limit on Health and Safety costs charged to DOE on a per job basis. Any Health and Safety costs over 15 percent (15%) will be charged either to Low-Income Home Energy Assistance Program (LIHEAP) funding, as approved from the West Virginia Department of Health and Human Resources (DHHR), the LIHEAP Grantee, or to Utility Programs as specific utility program guidelines allow. For PY 2021-2022 the Average Job Cost per Unit is calculated at \$7,776.

Health and Safety costs are recorded in the data management system and tracked separately at the subrecipient level for accounting purposes, as well as in the Weatherization Assistant auditing software and reported as a separate line item on the WV WAP “Monthly Progress Report.” A list of materials that are allowable charges to Health and Safety has been developed

and distributed. (See *WV WAP Materials Chart Attachment*). Subrecipients cannot add additional materials to this list. In this way, WVDO can monitor the Health and Safety costs on each job. The Health and Safety costs reported on the WV WAP “Monthly Progress Report” are reviewed monthly and WVDO works with the subrecipients to bring them into or remain in compliance. WVDO also tracks the Health and Safety costs in the statistical analysis tool and other various spreadsheets as discussed in *Section V.6 Weatherization Analysis of Effectiveness*.

WVDO has worked with the utility companies and scopes of work have been adjusted so that the WV WAP can use certain utility funding to cover particular Health and Safety costs (specified in the Scopes of Work/Program Designs of the utility program), to lessen the burden on the DOE funds. At this time, not all utility partnerships allow for Health and Safety costs in their programs, but WVDO will continue to pursue this option in the future.

#### **4.0 – INCIDENTAL REPAIR MEASURES**

Incidental Repairs means those repairs necessary for the effective performance or preservation of weatherization materials. Such repairs include, but are not limited to, minor roof repair, framing or repairing windows and doors which could not otherwise be caulked or weather-stripped, and providing protective materials, such as paint, used to seal materials installed under this program. Incidental repairs must be justified in the client file with an explanation for their need and relationship to a specific energy conservation measure (ECM) and included in the Savings-to-Investment Ratio (SIR) of the group of ECMs. The WV WAP has developed a spreadsheet identifying allowable measures to be installed under Health and Safety and allowable measures to be installed as incidental repairs. (See *WV WAP Materials Chart Attachment*)

#### **5.0 – DEFERRAL/REFERRAL POLICY**

The WV WAP developed and implemented a *WV WAP Deferral Policy* on August 21, 2012, to assist in the decision to defer weatherization assistance on an eligible dwelling in attempt to standardize the procedure throughout West Virginia. As per the policy, a deferral does not mean that weatherization assistance will never be available, but that work must be postponed until the problems at the home can be resolved. Subrecipient crews and contractors are expected to pursue all reasonable options on behalf of the client, within program guidelines. After an on-site visit has been conducted, if conditions warrant and the subrecipient determines that the home meets one (1) or more of the following deferral conditions, a letter must be sent to the client outlining the conditions present at the dwelling and the justification for deferral. The reason for deferral must be selected and documented in the database management system and the database management system automatically generates the deferral letter with the proper justification to be submitted to the client.

Possible deferral conditions include but may not be limited to the following:

- a. Structurally unsound dwelling that is not suitable and adaptable to weatherization services, and the WAP does not have the resources to do necessary repairs;



- b. Electrical or plumbing hazards that cannot be resolved prior to or as part of weatherization services;
- c. The presence of raw sewage around or in any part of the dwelling;
- d. The presence of a dead animal, or animal feces, in an area where program staff must install weatherization measures;
- e. Excessive debris and clutter in and around the dwelling that limits access to the dwelling and areas within the dwelling:
  - Clutter Image Rating: Living Room - Dwelling deferred with a rating of 4 or Greater
  - Clutter Image Rating: Bedroom - Dwelling deferred with a rating of 4 or Greater
  - Clutter Image Rating: Kitchen - Dwelling deferred with a rating of 4 or Greater
- f. Pets unchained or running loose that would be distracting or unsafe to program staff;
- g. The client is uncooperative, abusive, or threatening to the crew, or there is an apparent threat of violence or abuse to any program worker, or any household member, during the weatherization process;
- h. The presence or use of any controlled substance in the dwelling during the weatherization process;
- i. Environmental hazards, such as serious moisture problem, known excessive radon, friable asbestos, excessive lead paint, or other environmental hazards that cannot be resolved prior to or as part of the weatherization services;
- j. Evidence of substantial infestation of rodents, insects, bats, or other harmful/objectionable animals that are difficult to control;
- k. Major remodeling is in progress, limiting the proper installation of weatherization measures;
- l. Substantial standing water in or around the crawl space or basement area limiting the proper completion of weatherization measures;
- m. Dwelling resident has a medical condition that prohibits the installation of insulation and/or other weatherization measures;
- n. No cost-effective or appropriate health and safety measures can be done to the house resulting in minimal energy savings;
- o. Customer in arrears with utility vendor, gas service has been shut off, or electric service has been shut off;
- p. Client refusal of primary energy conservation measure (SIR  $\geq$  2);

- q. Client refusal of health and safety measure(s) necessary for client safety;
- r. Income verification needed;
- s. Updated utility information needed; and
- t. Other conditions not listed above that prohibit complete weatherization.

There are several steps detailed in the WV WAP *Deferral Policy* outlining the subrecipient and/or client's responsibilities after the aforementioned deferral letter is generated in order to possibly complete weatherization for a client that was originally deferred. These steps involve allowing the client to correct the identified issues or barriers to weatherization and providing the subrecipient with documentation that issues have been addressed. There is also a procedure in place in the event that issues are not addressed, or no response is received from the client. Once reasons for deferral are resolved, the application is re-activated within the data management system. Depending on the timing of the correction of deferral issues, eligibility criteria including income verification and prioritization status may need refreshed. The WV WAP Deferral Policy outlines the timing parameters in more detail. All applicable steps must be followed and all required documentation retained.

## **6.0 – HAZARD IDENTIFICATION AND NOTIFICATION FORM(S)**

Forms for Hazard Identification and notification can be found on the WVCAD website here;

[HTTP://WVCAD.ORG/SUSTAINABILITY/WEATHERIZATION-ASSISTANCE-PROGRAM](http://wvcad.org/sustainability/weatherization-assistance-program)

## **7.0 – HEALTH AND SAFETY CATEGORIES**

### **7.1 – AIR CONDITIONING AND HEATING SYSTEMS**

**Air Conditioning** - Research indicates that of all people who die of heat stroke, about 80 percent (80%) are age 50 or older. Deaths attributed to lung disease, diabetes and hypertension increase more than 50 percent (50%) during heat waves. Heat stroke occurs 12 to 13 times more frequently in people age 65 and older than in younger persons. It is also an accepted medical fact that infants and children up to 4 years of age are very sensitive to the effects of high temperatures and rely on others to regulate their environment.

Considering preventable deaths may illuminate the need for allowing air conditioning measures. While there are no statistics devoted specifically to that category in West Virginia, the next two (2) paragraphs are devoted to understanding the health risks in our state that relate to the statements above.

According to the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics, in 2015 there were 1,628 deaths in West Virginia due to Chronic Lower Respiratory Disease. 1,079 West Virginians died from stroke, and 784 people in West Virginia died from diabetes. The CDC reports that in 2014, 12.0 percent (12.0%) of adult West Virginians were diagnosed with non-pregnancy related diabetes.

While hypertension is the most prevalent cause of stroke and kidney failure, hypertension must be recognized as part of a bigger disease conglomerate almost always accompanied by obesity, diabetes, kidney disease or many other co-existing problems involving lifestyle and/or genetics. The West Virginia Department of Health & Human Resources Division of Health Promotion and Chronic Disease 2013 report shows over 40 percent (40%) of West Virginia adults have been told by a health care professional that they have hypertension which was ranked second highest nationally at that time. The same report goes on to state that more than 40 percent (40%) who had their cholesterol checked were told they had high cholesterol. This is of 78.7% that had the cholesterol checked in the past five years (50.76%), which puts them at greater risk for developing heart disease and stroke.

Air conditioning is the number one (1) protective factor against heat-related illness and death effecting people with health issues such as those stated above. **Therefore, air conditioning system replacement, repair or installation is allowed to be categorized as Health and Safety in homes with occupants under 4 years old, over 65 years old and/or where there are "at-risk" occupants.** Persons requesting the need for air conditioning based on their health being "at risk" **must provide a letter from a doctor defining the condition requiring an air-conditioned environment and the maximum allowable air temperature relevant to that person's individual condition.**

Air conditioning system replacement, repair or installation must be attempted through cost justification as an ECM first before using Health and Safety funding. **DOE, DHHR LIHEAP WAP, DHHR LIHEAP Emergency Repair and Replacement, and Utility funding can be used for air conditioning system replacement, repair, or installation.** Where this measure can be justified by the approved NEAT/MHEA audit, replacement, repair or installation is not to be included in Health and Safety.

New replacement units must be ENERGY STAR rated and have an efficiency rating of at least:

- Central AC or Heat Pump Cooling Efficiency = 13 SEER
- Heat Pump Heating Efficiency = 7.7 HSPF
- Window and wall mount air conditioners = 10 EER

**Heating Systems** - Heating system repair, replacement, or installation is allowed of red-tagged, inoperable, or nonexistent heating systems where climate conditions warrant. **DOE, DHHR LIHEAP WAP, DHHR Emergency Repair and Replacement, and Utility funds can be used.** Repair and replacement of

inoperable or unsafe combustion appliances is allowed, including the installation of direct vent-sealed combustion appliances. Direct vent-sealed combustion appliances may be installed to resolve Combustion Appliance Zone (CAZ) problems. Repair and cleaning must be considered before replacement. Correction of venting is allowed when testing indicates a problem.

## **7.2 – ASBESTOS – ALL – NOT AN ALLOWABLE CHARGE UNDER DOE, DHHR LIHEAP, OR UTILITIES FUNDING (SEE EACH SECTION BELOW FOR DETAILS)**

### **7.2A – ASBESTOS - IN SIDING, WALLS, CEILINGS, ETC.**

Removal of siding is allowed when performing energy conservation measures. All precautions must be taken to not damage siding. Asbestos siding should never be cut or drilled. It is recommended where possible to insulate through home interior. The client will be informed that suspected asbestos siding is present and what precautions will be taken.

### **7.2B – ASBESTOS - IN VERMICULITE**

When vermiculite insulation is found in an attic, unless testing proves otherwise, take precautionary measures as if the vermiculite contains asbestos.

Encapsulation by an appropriately trained asbestos control professional is allowed. Removal is not permitted. Blower door testing should be done with pressurization rather than depressurization.

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

Clients should be instructed not to disturb suspected asbestos containing material.

### **7.2C – ASBESTOS - ON PIPES, FURNACES, OTHER SMALL COVERED SURFACES**

Subrecipients will assume asbestos is present in covering materials.

Encapsulation is allowed by an AHERA asbestos control professional and should be conducted prior to blower door testing. Removal may be allowed by an AHERA asbestos control professional on a case-by-case basis. AHERA testing is allowed by a certified tester. Clients should be instructed not to disturb suspected asbestos containing material.

### **7.2D – BLOWER DOOR TESTING IN DWELLINGS WITH SUSPECTED ASBESTOS CONTAINING MATERIALS (ACM)**

Where the presence of asbestos or other potentially hazardous material is known or suspected, all **relevant state and federal (EPA) guidelines must be followed to ensure worker and occupant safety**. Blower door depressurization tests may not be performed in homes *where there is a risk of asbestos becoming airborne and being drawn into the dwelling*. Respirators with filter



cartridges must be worn when working in areas where exposure to airborne particulates is a risk.

Although Building Performance Institute standards (BPI Technical Standards for the Building Analyst Professional v1/4/12mda.) do not specifically prohibit pressurization, the emphasis is on the risk of asbestos becoming airborne. Blower door activities in the presence of damaged ACM (friable asbestos) pose a risk of causing the fibers to become airborne. Proper precautions should be taken to avoid risk of causing asbestos particles to become airborne, this is it recommended that no blower door testing take place where friable asbestos is present.

Once the ACM is properly repaired, sealed or removed by a properly licensed and qualified professional, then blower door testing may proceed.

#### **7.5 – BIOLOGICALS AND UNSANITARY CONDITIONS – NOT AN ALLOWABLE EXPENSE (EXCEPTIONS BOLDED BELOW)**

The detection and remediation of mold, odors, viruses, bacteria, unsanitary conditions, and rotting wood is often beyond the scope of the Weatherization Assistance Program and may be a reason for deferral. **Since workers often encounter these conditions, they try to remedy the situation if possible and take precaution to not exacerbate any potential problem. Factors such as cleaning agents, paints and turpentine, gasoline, sewage, animal waste, and excessive dust can sometimes be addressed to allow weatherization work to occur. Auditors will inform the client of observed conditions.**

#### **7.6 – BUILDING STRUCTURE AND ROOFING**

WV WAP crews often encounter homes in poor structural condition. In some cases, WAP services must be deferred until the dwelling is made safe and able to weatherize. When possible, subrecipients can coordinate their efforts with other programs to enable and enhance services. Homes with conditions that require more than incidental repair should be deferred unless repairs can be made with non-DOE funds. **The WV DHHR LIHEAP WAP Supplement Component “Home Repairs” allows for minor roof repairs.**

The auditor will perform a visual inspection to ensure that access to areas necessary for weatherization are safe for entry and performance of assessment, work, and inspection. The client will be notified of structurally compromised areas.

#### **7.7 – CODE COMPLIANCE**

The correction of pre-existing code compliance issues **is not an allowable cost other than where weatherization measures are being conducted.**

As per DOE WPN 17-07:

“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.” Testing required: “Visual inspection. Local code enforcement inspections”, the subrecipient personnel should also “Inform client of observed code compliance issues” according to the guidance.

#### **7.8 – COMBUSTION GASES – ALLOWABLE COSTS UNDER DOE AND DHHR LIHEAP WAP UNDER CIRCUMSTANCES LISTED BELOW**

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

Subrecipients will be required to conduct combustion safety testing when combustion appliances are present. The subrecipient must also upload pre and post draft/combustion tapes to the client file in DBA FACS Pro.

Subrecipients will conduct inspection and testing of Combustion Appliance Zones (CAZ) and confirm adequate clearances and test naturally drafting appliances for draft and spillage under worst case conditions before and after air tightening and inspect gas cooking appliances for safe operability.

Subrecipients will provide the client with combustion Safety and Hazards information, including the importance of using exhaust ventilation when cooking and the importance of keeping burners clean to limit the production of Carbon Monoxide (CO).

- **Appliances and Water Heaters** - Poorly functioning water heaters that may pose a health concern may be replaced on a case-by-case basis. Installation of one (1) water heater per dwelling is allowed. Repair, replacement and installation of moisture control appliances, such as dehumidifiers, condensate pumps and sump pumps are allowable on a case-by-case basis. Documentation must be maintained to justify replacement of water heaters and moisture control appliances. Replacement and installation of other appliances for health and safety reasons is not allowed. Repair and cleaning for other appliances is allowed. These measures are allowable under DOE, DHHR LIHEAP WAP, and Utilities.

## **7.9 – ELECTRICAL**

**Electrical - Other than Knob-and Tube Wiring** - Minor electrical repairs are allowed where health and safety of the occupant is at risk. Upgrades and repairs are allowed when necessary to perform specific weatherization measures.

Auditors will perform a visual inspection. Voltage drop and voltage detection testing are allowed.

**WV DHHR LIHEAP WAP Supplement Component “Electrical Upgrades” and APCo DSM Leveraging funds can be used with set amounts determined by WVDO/WV DHHR and American Electric Power (AEP) DBA Appalachian Power Company and Wheeling Power Company.**

**Electrical – Knob-and Tube Wiring** - Minor upgrades and repairs necessary for weatherization measures and where the health or safety of the occupant is at risk are allowed.

Where live knob-and-tube wiring exists, the following conditions must be met in order to install attic insulation:

- Wiring insulation must be intact and complete with no exposed areas and connections.
- S-type fuses that match the size of the wiring must be installed if they do not already exist. Any modification of the electrical panel must have prior written permission from the client. The subrecipient may wish to contract with a licensed electrician where questionable safety conditions exist.
- When installing cellulose or fiberglass, there must be a minimum of 1” clearance from the wiring. Precaution must be taken to prevent the possible drifting of the product, which could result in contact with the wiring.

The presence of knob-and-tube wiring, overloaded circuits, live bare wires, asbestos siding, or untreatable moisture in the wall cavities will be allowable reasons for not insulating exterior walls. If the problems can be corrected within reasonable means, the walls may be insulated.

**WV DHHR LIHEAP WAP Supplement Component “Electrical Upgrades” and APCo DSM Leveraging funds can be used with set amounts determined by WVDO/WV DHHR and American Electric Power (AEP) DBA Appalachian Power Company and Wheeling Power Company.**

## **7.10 – FORMALDEHYDE, VOLATILE ORGANIC COMPOUNDS (VOCs), FLAMMABLE LIQUIDS, AND OTHER AIR POLLUTANTS**

Crew awareness of potential problems with formaldehyde and volatile organic compounds is important when addressing air sealing. Crews are instructed to remove any VOCs when possible and to give client education regarding the potential dangers. If removal cannot be performed or is not allowed by the

client, the unit must be deferred. **DOE and DHHR LIHEAP WAP funds can be used only to the extent listed above.**

**7.11 – FUEL LEAKS - ALLOWABLE COSTS UNDER DOE AND DHHR LIHEAP WAP UNDER CIRCUMSTANCES LISTED BELOW**

Auditors will inspect and test for gas or oil leakage at connections of natural gas, propane piping, or oil systems. If leaks are found, immediate action will be taken to notify occupant to help ensure leaks are repaired. If the Auditor determines an immediate need for repair, he will notify the client and the proper personnel in order to remedy the leaks. Leaks will be documented and become a part of the Audit report. The report will specify repair for leaks and replacement for hazardous or damaged gas or oil connectors and pipes. Severe natural gas and LP gas leaks, procedures defined in NFPA National Fuel Gas Code Appendix E. Oil leaks will be repaired by qualified personnel.

NFPA National Fuel Gas Code Appendix E Emergency Procedures:

Where an investigation discloses a concentration of gas inside of a building, it is suggested the following immediate actions should be taken:

1. Clear the room, building or area of all occupants. Do not reenter the area until it has been determined to be safe.
2. Use every practical means to eliminate sources of ignition. This includes, but is not limited to: matches, lighters, operating electrical switches or devices, opening furnace or other appliance doors and operating telephones.
3. If possible, cut off all electric circuits at a remote source to eliminate operation of automatic switches in the danger area. Safety flashlights designed for use in hazardous atmospheres are recommended for use in such emergencies.
4. Notify all personnel in the area and the gas supplier from a remote telephone away from the leak.
5. Ventilate the affected portion of the building by opening windows and doors.
6. Shut off the supply of gas to the areas involved.
7. Investigate other buildings in the immediate area to determine if there is escaping gas.

**7.12 – GAS OVENS / STOVETOPS / RANGES**

Subrecipients or contractors will follow the BPI Technical Standards (ANSI/BPI - 1200-S-2017 (7.10)) when addressing gas/propane ovens.



Range tops and ovens produce moisture and oxides of nitrogen. Excess moisture is not good for the durability of the home (possibly contributing to mold problems) and NOX is not healthy. These combustion appliances are capable of producing CO, which is a health hazard. In all cases a carbon monoxide detector is recommended and homeowners should use exhaust ventilation when using these appliances. New appliances may require an extended warm up period to reach steady state.

1. Remove any items/foil in or on oven.
2. Make sure self-cleaning features are not activated, set oven to highest setting.
3. Test oven for CO in the flue, before dilution air.
4. After 5 minutes of operation, check for steady state:
  - **Level I Action - 100 ppm to 300 ppm** as measured you must install a carbon monoxide detector and recommendation for service must be made to the consumer.
  - **Level II Action - Greater than 300 ppm** as measured - the unit must be serviced prior to work. If greater than 300 ppm after servicing, exhaust ventilation must be provided with a capacity of 25 CFM continuous or 100 CFM intermittent.

**\*Continually monitor ambient CO levels during test.**

Since all gas cooktops generate CO and it is difficult to simulate an actual operating condition for these appliances during the course of a typical house inspection, specific action levels for these burners are not specified by BPI. However, technicians must specify appropriate measures to mitigate potentially dangerous CO production of these units. ASHRAE exposure limits for CO shall be referenced when making recommendations for CO control in these areas. The recommended ASHRAE limit for 24-hour exposure of 9 ppm shall be applied to building occupants. In most cases, it will not be possible to effectively test for this condition, however the following measures shall be recommended whenever gas cooktops exist in the home:

- If burners do not ignite properly or do not burn cleanly, a clean and tune of the appliance shall be recommended.
- If the appliance is located in a confined space and mechanical ventilation is not readily available, mechanical ventilation shall be recommended.

Ventilation provided for unvented gas ovens must provide a minimum capacity of 25 cfm continuous airflow or 100 cfm intermittent. **These measures are allowable under Utilities funding.**

#### **7.13 – HAZARDOUS MATERIALS DISPOSAL**

**[LEAD, REFRIGERANT, ASBESTOS, MERCURY (INCLUDING CFLS/FLUORESCENTS), ETC.]**

*Subrecipients or contractors will establish a program of regulation for the disposal of hazardous materials and waste in accordance with local, state, (Hazardous Waste Management Act - Chapter 22 Article 18.) and federal standards (CFR title 40 CFR 260-273).*

#### **7.14 – INJURY PREVENTION OF OCCUPANTS AND WEATHERIZATION WORKERS**

Minor repairs may be done when weatherizing a home in order to prevent injury to weatherization workers and to occupants. These repairs may only be done to the extent of ensuring safety. **Allowable under DOE, DHHR LIHEAP WAP, and Utilities funding.**

#### **7.15 – LEAD BASED PAINT – ALLOWABLE UNDER DOE AND DHHR LIHEAP WAP FUNDING TO THE EXTENT LISTED BELOW**

Subrecipients or contractors will follow EPA's Lead; Renovation, Repair and Painting Program (RRP) which includes becoming a certified lead renovation firm. In addition to RRP, weatherization requires all weatherization crews working in pre-1978 housing to be trained in Lead Safe Weatherization (LSW). Deferral is required when the extent and condition of lead-based paint in the house would potentially create further Health and Safety hazards. Testing is allowed. Job site setup and cleaning verification is required by a Certified Renovator.

Each subrecipient or contractor must give notification to the occupants of homes to be weatherized regarding the potential hazards of lead paint and lead paint dust if the home was built prior to 1978. The EPA's publication "Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools" must be given to an adult occupant of the affected home prior to beginning weatherization. For occupied homes, the weatherization staff, crew, or contractor must have an adult tenant or homeowner sign an acknowledgement after receiving the pamphlet. As an alternative to delivery in person, the subrecipient or contractor may mail the lead hazard information pamphlet to the owner and/or tenant. The pamphlet must be mailed at least seven (7) days before renovation. Mailing must be documented by a certificate of mailing from the post office.

WVDO developed and implemented a *Lead Safe Work Policy* on July 27, 2012, including standardized forms and processes to supplement information available from DOE and the EPA (This policy was amended August 16, 2013). The policy provides additional information and guidance on LSW, proper practices, and documentation requirements.

LSW includes weatherization worker protection, general LSW practice standards, and lead dust containment standards.

1. Level 1 Containment:

- a. Level 1 containment is required in pre-1978 homes when less than 6'2" of interior painted surface per room or 20'2" of exterior painted surface will be disturbed.
- b. Level 1 containment consists of methods that prevent dust generation and contains all debris generated during the work process. The containment establishes the work area which must be kept secure.
- c. Measures that may fall within this guideline include:
  - i. Installing or replacing a thermostat
  - ii. Drilling and patching test holes
  - iii. Replacing HEPA filters and cleaning HEPA vacuums
  - iv. Changing furnace filter(s)
  - v. Removing caulk or window putty (interior)
  - vi. Removing caulk or window putty (exterior)
  - vii. Removing weather-stripping

2. Level 2 Containment:

- a. Level 2 containment is required when weatherization activities will disturb more than 6'2" of interior surface per room or 20'2" of exterior surfaces in homes built prior to 1978. Level 2 containment consists of methods that define a work area that will not allow any dust or debris from the work area to spread. Level 2 containment requires the covering of all horizontal surfaces, constructing barrier walls, sealing doorways, covering HVAC registers with approved materials, and closing windows to prevent the spread of dust and debris.
- b. Measures requiring Level 2 containment may include:
  - i. Drilling holes in interior walls
  - ii. Drilling holes in exterior walls, removing painted siding
  - iii. Cutting attic access into ceiling or knee walls
  - iv. Plane a door in place
  - v. Replacing door jambs and thresholds
  - vi. Replacing windows or doors
  - vii. Furnace replacements
- c. Additionally, Level 2 containment must ALWAYS be used where any of the following is conducted (even if the activities will disturb less than the hazard levels within the Level 1 category):
  - i. Window replacement

- ii. Demolition of painted surface areas
- iii. Using any of the following: Open-flame burning or torching; machines to remove paint through high-speed operation without HEPA exhaust control; or operating a heat gun at temperatures at or above 1,100 degrees Fahrenheit.

**Note:** The use of a drill, reciprocating saw, or other power tool is considered a “machine” for removing paint. Examples include: Cutting a hatch inside the dwelling or interior drilling of holes for the installation of insulation require Level 2 containment.

3. There must be adequate documentation in the client file to demonstrate that LSW measures were performed when necessary. Documentation should include photos of the site and containment set up, as well as a listing of materials used and measures taken. Quality Control Inspector must also certify that LSW procedures were used and properly implemented.
4. WV WAP will adhere to EPA lead safe rules as written in the *Lead; Renovation, Repair, and Painting Program Final Rule* (LRRPP Final Rule), as directed by DOE.
5. Weatherization of HUD program housing stock, including HUD Section 8, is infrequent in West Virginia. These units will only be weatherized if the owner provides a “Certificate of Lead-Based Paint Compliance” (copy must be in client file) that documents abatement or control of any lead paint hazard has been addressed and will agree that the local subrecipient will not be liable for any lead hazards, provided the safe work practices generally outlined above are employed.
6. In cases where the subrecipient cannot safely weatherize a home due to lead paint hazards, the subrecipient may defer the work. Such deferral will be considered by WVDO on a case-by-case basis. Subrecipients may not weatherize dwellings where there are cases of documented or suspected lead poisoning. Additionally, subrecipients will not weatherize homes where there is an extraordinary lead paint hazard with no means to abate the hazard, including insufficient funds or insufficient training to properly address the hazard.

#### **7.16 – MOLD AND MOISTURE – NOT AN ALLOWABLE EXPENSE UNDER DOE, DHHR LIHEAP WAP, OR UTILITIES FUNDING**

The Weatherization Assistance Program is not a mold remediation program. The use of DOE funds for the removal of mold and other related biological substances is not an allowable weatherization expense. Mold testing is not an allowable cost. If necessary, Weatherization Assistance Program services may



need to be deferred until the existing mold problem can be corrected or referred to another program for funding of remedial action.

All homes will be inspected for previous and existing moisture problems using the WV WAP “Mold and Moisture Assessment Findings Form” to document existing mold and moisture related problems in homes.

Moisture, mold, and mildew can seriously affect the health and safety of the client and crew. Steps must be taken to alleviate moisture problems. The WV WAP will ensure that regular weatherization work is performed in a manner that does not contribute to the increase of any mold problems, and when the work is performed properly, can alleviate many mold conditions.

- **Drainage** - Auditors will conduct a visual inspection. Major drainage issues are beyond the scope of the Weatherization Assistance Program. Homes with conditions that may create a serious health concern that require more than simple repair should be deferred.

**7.17 – PESTS – NOT AN ALLOWABLE EXPENSE UNDER DOE, DHHR LIHEAP WAP, OR UTILITIES FUNDING**

- Pest removal is cause for deferral unless other funds are available, or the cost is considered when running NEAT or MHEA. Screening of windows and points of access is allowed to prevent pest intrusion.
- Auditors will assess the presence and degree of infestation and risk to workers.
- Auditors will inform clients of the observed condition and associated risks.

**7.18 – RADON – SEE BOLDED BELOW**

- Each client/dwelling must receive a copy of the EPA’s *A Citizen’s Guide to Radon* and be informed of the related risks. Additionally, each client must sign the Radon Informed Consent form prior to receiving weatherization services. This form must be retained in the customer’s file.
- Whenever conditions permit, exposed dirt must be covered with a vapor permeable ground cover.
- In dwellings where radon may be present, precautions should be taken to reduce the likeliness of making radon concentrations higher. Precautions may include general weatherization procedures, e.g., sealing foundation penetrations, covering open sump pits, isolating the basement from the conditioned space, and ensuring crawl space venting is in place or installed, etc.
- **Radon mitigation is not an allowable Health & Safety cost**

- Radon abatement is not an allowable activity with DOE funds; major radon problems are deferred and referred to the appropriate local environmental agency.

**7.19 – SAFETY DEVICES: SMOKE AND CARBON MONOXIDE ALARMS, FIRE EXTINGUISHERS – ALLOWABLE EXPENSE UNDER DOE, DHHR LIHEAP WAP, AND UTILITIES FUNDING TO THE EXTENT LISTED BELOW**

If smoke alarms are inoperable or non-existent, at least one (1) alarm must be installed in each weatherized dwelling on each floor. Follow the manufacturer's recommendations for locating and installing the alarm(s). If existing hard-wired smoke alarms are inoperable or broken, they must be replaced with comparable units. Replacement of operative smoke alarms is not an allowable expense. Typically, alarms are installed where the clients spend the most time, such as near bedrooms.

An approved CO alarm will be installed in all homes where functional CO detector/warning equipment does not already exist. CO detectors will comply with UL 2075. Single-station CO alarms will comply with UL 2034 and will be installed in accordance with local code and the manufacturer's installation instructions. If an entire multi-family building is to receive weatherization services, a CO alarm should be installed in each unit of the complex.

Providing fire extinguishers is allowable only when solid fuel is present. Subrecipient will provide the client with verbal and written information on use of smoke/CO detectors and fire extinguishers where allowed.

**7.20 – OCCUPANT HEALTH AND SAFETY CONCERNS AND CONDITIONS**

WV WAP subrecipients are required to take all reasonable precautions against performing work on dwellings that will subject clients to health and safety risks. Before beginning work on the dwelling, the subrecipient must take into consideration the health concerns of each occupant, the condition of the dwelling, and the possible effect of work to be performed on any particular health or medical condition of the occupants. When a person's health is fragile and/or the work activities would constitute a health or safety hazard, the occupants at risk will be required to leave the home during these work activities.

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

**DOE and DHHR LIHEAP WAP funds can be used only to the extent detailed above.**

### **Procedure for Identifying Occupant Health Concerns**

- When a person's health may be at risk and/or the work activities could constitute a Health and Safety hazard, the occupant at risk will be required to take appropriate action based on the severity of the risk.
- The at-risk occupant should reveal they have known or suspected health concerns during the initial application for weatherization services.
- The at-risk occupant should be provided with known risks of the weatherization process.
- Subrecipient contact information should be provided to the occupant so that the occupant can easily provide information about health issues or concerns.
- Failure or the inability to take appropriate actions must result in deferral of the weatherization work.

### **Documentation for identifying occupant health concerns will include:**

- Client's name and address;
- Dates of the audit/assessment and when the client was informed of a potential; health and safety issue;
- Clear description of the problem;
- Statement indicating if, or when weatherization could continue; and
- Client(s) signature(s) indicating that they understand and have been informed of their rights and options.

### **7.21 – VENTILATION AND INDOOR AIR QUALITY – ALLOWABLE UNDER DOE, DHHR LIHEAP, AND UTILITIES FUNDING TO THE EXTENT LISTED BELOW**

A complete review of the current version of ASHRAE minimum ventilation standards was completed including effective methods for full compliance to ASHRAE 62.2-2016. Training will occur throughout the Program Year.

Weatherization trained personnel will calculate the ventilation requirements for each home utilizing the current ASHRAE spreadsheet or Residential Energy Dynamics (RED) online tool to ensure adequate indoor air quality. Continuous and/or intermittent ventilation fans will be installed based upon spreadsheet calculations. The ASHRAE 62.2-2016 standard was released in 2016 and implemented by the WV WAP for Program Year 2017 – 2018. WVDO weatherization specialist field/technical monitors will monitor to this standard for PY 2021 – 2022.

For homes that require added ventilation, subrecipients must implement a ventilation strategy that meets the requirements of the current ASHRAE standards. Subrecipients are required to evaluate any pre-existing mold and moisture conditions, potential spot ventilation needs and pre and post fan flow rates. If whole-house ventilation requirements are less than or equal to 15 CFM, then additional ventilation is not required. If the Energy Auditor's pre-site evaluation

determines that due to existing conditions the threshold ventilation is warranted, it will be allowed.

If the whole-house minimum ventilation requirement is **greater than 15 CFM**, a system supplying the design ventilation airflow must be installed. The subrecipient Quality Control Inspector will verify that fan flow rates have been met based on design requirements.

Implementing ASHRAE 62.2 will not be required where acceptable indoor air quality already exists. Existing ventilation systems will not be updated if found to be adequate and in good operating condition.

Subrecipients will provide clients with information on function, use, and maintenance of ventilation systems and components. Subrecipients will provide a disclaimer that current ASHRAE 62.2 does not account for high polluting sources or guarantee indoor air quality.

#### **7.22 – WINDOW AND DOOR REPLACEMENT, WINDOW GUARDS**

Replacement, repair or installation of windows or doors is not an allowable Health and Safety cost but may be allowed as an efficiency measure if justified by the NEAT or MHEA audit. If window and door replacement, repair or installation is limited in scope such as less than three (3) windows and only one (1) door. The measures may be included as infiltration reduction (NEAT) and general air sealing (MEHA) as long as the SIR is greater than one (1) for the measure. **Allowable under DOE and DHHR LIHEAP WAP Supplemental Component “Home Repairs” only to the extent listed above.**

#### **7.23 – WORKER SAFETY (OSHA, ETC.)**

Weatherization personnel must follow applicable OSHA standards and Safety Data Sheets (SDS) and take precautions to ensure the health and safety of themselves and other personnel. SDS must be posted wherever workers may be exposed to hazardous materials. Subrecipients must perform assessments to determine if crews are practicing and utilizing safe work practices and that all workers receive training specific to hazards that the worker can reasonably expect to encounter on a particular job site.

- Subrecipients are also required to have bi-monthly safety meetings. WVDO Programmatic monitors review safety meeting notes to ensure meetings are conducted and topics are relevant to employee safety.
- All auditors, crews, and contractors must use and understand the importance of Personal Protection Equipment (PPE).
- OSHA 10 training for all current weatherization personnel. OSHA 30 for all crew leaders is not required but considered a best practice.
- Confined spaces – such as crawl spaces and attics – are not designed for continuous occupancy and are difficult to exit in the event of an emergency. People working in confined spaces face life-threatening hazards including toxic



substances, electrocutions, explosions, and asphyxiation. See 29 CFR 1926, Subpart AA from OSHA for details in addressing confined spaces. The subrecipient is required to have a written plan in place regarding confined spaces which is available upon request.

- Subrecipients must ensure and document that HazCom is addressed, and training made available to all new weatherization staff, and that topics such as asbestos identification and awareness, biological/unsanitary conditions/pollutants, building roof/structure inspection, combustion gases & fuel leaks, electrical safety, hazardous material disposal, mold/moisture identification, pests, safety devices, occupant concerns/conditions, other applicable OSHA standards beyond the confined space indicated, etc., are reviewed regularly in Safety Meetings or training is provided in online/virtual settings or by certified onsite trainers. This information is reviewed in annual WVDO subrecipient monitorings and through desk top monitorings throughout the Program year.

**Allowable under DOE and DHHR LIHEAP WAP only to the extent listed above.**

#### **CLIENT EDUCATION – ALLOWABLE PER DOE AND DHHR LIHEAP WAP**

As mentioned in *Section V.8.4 Training and Technical Assistance Approach and Activities*, Energy Education is one of the most important weatherization processes to ensure the maximum effectiveness of the weatherization measures and each subrecipient has at least one (1) certified Energy Educator. The Energy Education process, educational materials used, and forms utilized (described in *Section V.8.4*) will encompass all weatherization measures installed, including any Health and Safety related information or issues identified/ corrected, or those that could be encountered if the integrity of measures is altered, measures are removed, made not to function or damaged, or proper maintenance is not performed as instructed. WVDO has added an additional client file document requirement that has a client sign-off that includes (but is not limited to) whether client education took place and all education/maintenance information necessary was communicated. This form supplements current client education documents which also includes client and subrecipient sign-offs.

# Clutter image rating: Living room

Please select the photo below that most accurately reflects the amount of clutter in your room.



1



2



3



4



5



6



7



8



9



# Clutter Image Rating: Bedroom

Please select the photo that most accurately reflects the amount of clutter in your room.



1



2



3



4



5



6



7



8



9

# Clutter Image Rating Scale: Kitchen

Please select the photo below that most accurately reflects the amount of clutter in your room.



1



2



3



4



5



6



7



8



9



**WEST VIRGINIA  
WEATHERIZATION ASSISTANCE PROGRAM**

**2020 – 2021 STATE PLAN**

**ATTACHMENTS**

## **Updated Materials Additions, Edits, and Classifications**

(Updated Materials Additions, Edits and Classifications – 2021 **Materials Chart**)

### **Heating ECM:**

#### **Direct materials for Energy Conservation Measure:**

- No updates

#### **Ancillary Items (Cost must be included in SIR for associated individual ECM):**

These items are usually needed to complete a new system or replacement installation. Most often, existing or leftover parts of the old system being replaced are in insufficient condition or do not meet the new system manufacturer or industry standards. Not using new upgraded parts could result in the voiding the warranty of a new system. These items would be included in the cost of the Heating ECM.

- whip kit
- electrical disconnect
- pipe insulation (suction and condensate line)
- floor protection for gas direct vent space heater
- electric heat strip (new heat pump)
- refrigerant lines
- refrigerant
- brazing rods

#### **Incidental Repair Measure (IRM) (Cost must be included in the SIR for the whole unit package of ECM)**

The following are associated with the direct materials for Energy Conservation Measure heating system repair. The items are necessary for the effective performance or preservation of the ECM heating system repair and are necessary to ensure the lifetime of the ECM of heating system repair.

- prefabricated metal duct
- blower motor
- contactor
- fan switch
- limit
- transformer
- coil cleaner
- filter grills
- floor register
- furnace filter
- oil nozzles

### **Cooling ECM:**

#### **Direct materials for Energy Conservation Measure:**

As with heating and mentioned as a Standard for Conformance in Appendix A, there is significant energy savings that result from cooling system clean/tune and cooling system repair. If air cannot be conditioned properly, the system must run longer cycles or the occupants will add additional appliances(costs) to get the same comfort level at additional costs.

Labor is the largest cost of these measure but the return in energy savings is enough to justify the measures being performed.

- cooling system clean/tune
- cooling system repair

**Ancillary Items (Cost must be included in SIR for associated individual ECM):**

As with heating systems, these items are usually needed to complete a new system or replacement installation. Most often, existing or leftover parts of the old system being replaced are in insufficient condition or do not meet the new system manufacturer and/or industry standards. Not using new upgraded parts could result in the voiding the warranty of a new system. These items would be included in the cost of the Cooling ECM.

- breaker
- whip kit
- electrical disconnect
- filter grill
- pipe insulation (suction line)
- brazing rods

**Incidental Repair Measure (IRM) (Cost must be included in the SIR for the whole unit package of ECM)**

The following are associated with the direct materials for Energy Conservation Measure cooling system repair. The items are necessary for the effective performance or preservation of the cooling system repair ECM and are necessary to ensure the lifetime of the ECM of cooling system repair.

- prefabricated metal duct
- blower motor
- contactor
- transformer
- fan switch
- limit
- a-coil
- coil cleaner

**Duct Sealing ECM:**

**Direct materials for Energy Conservation Measure:**

When there are one or more sections of duct too damaged to repair or are completely missing, it is more cost effective to replace duct sections with prefabricated duct, whether purchased from a manufacturer or fabricated onsite. Replacement of ducts are allowed in Appendix A Heating and Cooling System Repairs and Tune-Ups/Efficiency Improvements.

- prefabricated metal duct

**Ancillary Items (Cost must be included in SIR for associated individual ECM):**

- No updates

**Incidental Repair Measure (IRM) (Cost must be included in the SIR for the whole unit package of ECM)**

- No updates

**Duct Insulation ECM:**

**Direct materials for Energy Conservation Measure:**

Although foil faced duct wrap and vinyl duct wrap are already listed on the Materials Chart as direct

materials for Energy Conservation Measure and appear as Heating and Cooling System Repairs and Tune-Ups/Efficiency Improvements, the minimum R-value is not indicated. The WV WAP SWS specifies that ducts that run through unconditioned spaces must be insulated to a minimum of R8.

- foil faced duct wrap - R8
- vinyl duct wrap - R8

**Ancillary Items (Cost must be included in SIR for associated individual ECM):**

- No updates

**Incidental Repair Measure (IRM) (Cost must be included in the SIR for the whole unit package of ECM)**

- No updates

**Attic Insulation ECM:**

**Direct materials for Energy Conservation Measure:**

- No updates

**Ancillary Items (Cost must be included in SIR for associated individual ECM):**

There are times that ceiling cavities and shed roofs must be accessed and blown from the interior of a house. The access holes must be sealed to form an airtight barrier from the inside to keep the insulation from migrating to the inside of the dwelling. These items will be included in the cost of the Attic Insulation ECM.

- ceiling plugs
- foam insulation board (when insulating knee walls)
- house wrap or fabric (when insulating knee walls)
- furring strips (when insulating knee walls)
- foam insulation board blocking (when insulating knee walls)

**Incidental Repair Measure (IRM) (Cost must be included in the SIR for the whole unit package of ECM)**

There have been numerous incidents where jobs have been deferred due to minor roof leaks. The addition of this item is necessary for the effective performance or preservation of the Attic Insulation ECM and are necessary to ensure the lifetime of the Attic Insulation ECM.

- minor roof repair of leaking roof (ONLY when insulation is required)

**Dense Pack (Wall) ECM:**

**Direct materials for Energy Conservation Measure:**

- No updates

**Ancillary Items (Cost must be included in SIR for associated individual ECM):**

Two-part foam is often used to seal around and hold blocking in place at the top and bottom balloon as with knee walls and is used to seal random bypasses that would allow cellulose to migrate into crawlspaces, basements and attics.

- Two-part foam

**Incidental Repair Measure (IRM) (Cost must be included in the SIR for the whole unit package of ECM)**

There are times when roof leak damage to sidewall can result in the deferral of a job because the situation would make dense pack side wall insulation ineffective. The addition of this item is necessary for the effective performance or preservation of the Dense Pack (Wall) insulation ECM and are necessary to ensure the lifetime of the Dense Pack (Wall) insulation ECM.

- minor roof repair of leaking roof that may create moisture/mold issue in new wall insulation (ONLY when insulation is required)

#### **Non-Dense Pack ECM:**

##### **Direct materials for Energy Conservation Measure:**

- No updates

##### **Ancillary Items (Cost must be included in SIR for associated individual ECM):**

- No updates

#### **Incidental Repair Measure (IRM) (Cost must be included in the SIR for the whole unit package of ECM)**

There have been numerous incidents where jobs have been deferred due to minor roof leaks. The addition of this item is necessary for the effective performance or preservation of the Non-Dense Pack ECM and are necessary to ensure the lifetime of the Non-Dense Pack ECM.

- minor roof repair of leaking roof (ONLY when insulation is required)

#### **Floor Treatment ECM:**

##### **Direct materials for Energy Conservation Measure:**

- No updates

##### **Ancillary Items (Cost must be included in SIR for associated individual ECM):**

- No updates

#### **Incidental Repair Measure (IRM) (Cost must be included in the SIR for the whole unit package of ECM)**

There have been times the entire floor has not been insulated or jobs have been deferred due to plumbing leaks. The addition of this item is necessary for the effective installation, performance or preservation of the Floor Treatment ECM and are necessary to ensure the lifetime of the Floor Treatment Pack ECM.

- plumbing leak repair (when floor is insulated)

#### **Energy Improvement ECM:**

##### **Direct materials for Energy Conservation Measure:**

Boiler distribution pipe insulation should have been listed on the original Materials Chart. Boiler distribution pipe insulation is in Appendix A under Thermal Insulating Materials for Pipes, Ducts, and Equipment Such as Boilers and Furnaces.

- boiler distribution pipe insulation-preformed

##### **Ancillary Items (Cost must be included in SIR for associated individual ECM):**

- No updates

#### **Incidental Repair Measure (IRM) (Cost must be included in the SIR for the whole unit package of ECM)**

There have been times that pipes have not been insulated due to plumbing leaks. The addition of this item is necessary for the effective installation, performance or preservation of the pipe insulation ECM and are necessary to ensure the lifetime of the pipe insulation ECM.

- water leak repair (only when pipes are insulated)

#### **Other Health & Safety**

##### **Health & Safety Measure (Separate cost justification, not included in SIR)**

When running dryer exhaust and bathroom exhaust through unconditioned areas, the R-value of the



duct shall be insulated to a minimum of minimum of R8.

- R8 exhaust vent duct

### **Tiny Homes/Auxiliary Dwelling Units:**

The WV WAP may provide weatherization to Tiny Homes and Auxiliary Dwelling Units (ADUs). ***If the dwelling/unit is under 550 square feet (51.1 m<sup>2</sup>) it must be submitted to WVDO for approval to the Weatherization Manager or designated reviewer.*** The dwelling must have a living space of no less than 220 square feet (20.4 m<sup>2</sup>) of conditioned floor area. An additional 100 square feet (9.3 m<sup>2</sup>) of conditioned floor area for each occupant of such dwelling in excess of two (2) must be added. The dwelling's minimum square footage calculations shall be determined as per ANSI Standard Z765-2003.

In addition to ANSI Z765-2003:

1. Living space (finished areas/rooms) must have a conditioned floor area minimum of 70 square feet (6.5 m<sup>2</sup>). ***Exception: Kitchens***
2. The dwelling must have a separate bathroom containing a fully functioning sink, lavatory, and a bathtub or shower.
3. If the unit/dwelling's floor, frame, or foundation is prefabricated, a Manufactured Home Energy Audit (MHEA) must be used.
4. If the unit/dwelling is on slab, block, or is free of any typical manufactured housing supports a National Energy Audit Tool (NEAT) must be used.
5. If the unit/dwelling has affixed wheels, axels, or is made to be towable, the unit is considered a Recreational Vehicle (RV) and cannot be weatherized.

## **APPENDIX A—WAP UNDERTAKINGS EXEMPT FROM SECTION 106 REVIEW**

All undertakings will be done in accordance with applicable local building codes or the International Building Code, where applicable. In accordance with 36 CFR 800.3(a)(1), the following undertakings have been determined to have no potential to cause effects on historic properties:

### **A. Exterior Work**

- 1) Air sealing of the building shell, including caulking, weather-stripping, and other air infiltration control measures on windows and doors, and installing thresholds in a manner that does not harm or obscure historic windows or trim.
- 2) Thermal insulation, such as non-toxic fiberglass and foil wrapped, in walls, floors, ceilings, attics, and foundations in a manner that does not harm or damage historic fabric.
- 3) Blown in wall insulation where no holes are drilled through exterior siding, or where holes have no permanent visible alteration to the structure
- 4) Removable film on windows (if the film is transparent), solar screens, or window louvers, in a manner that does not harm or obscure historic windows or trim.
- 5) Reflective roof coating in a manner that closely resembles the historic materials and form, or with materials that restore the original feature based on historic evidence, and in a manner that does not alter the roofline, or where not on a primary roof elevation or visible from the public right-of-way.
- 6) Storm windows or doors, and wood screen doors in a manner that does not harm or obscure historic windows or trim.
- 7) Repair of primary windows, doors and door frames. Replacement requires submission for approval to WVSHPO.
- 8) Repair of minor roof and wall leaks prior to insulating attics or walls, provided repairs closely resemble existing surface composite

### **B. Interior Work**

***Special Note:*** Undertakings to interior spaces where the work will not be visible from the public right of way; no structural alterations are made; no demolition of walls, ceilings or floors occurs; no drop ceilings are added; or no walls are leveled with furring or moved, should be automatically excluded from SHPO review. This work includes:

#### ***1. Energy efficiency work within the building shell:***

- a. Thermal insulation in walls, floors, ceilings, attics, crawl spaces, ducts and foundations
- b. Blown in wall insulation where no decorative plaster is damaged.
- c. Plumbing work, including installation of water heaters
- d. Electrical work, including improving lamp efficiency

- e. Sealing air leaks using weather stripping, door sweeps, and caulk and sealing major air leaks associated with bypasses, ducts, air conditioning units, etc.
- f. Repair or replace water heaters
- g. Adding adjustable speed drives such as fans on air handling units, cooling tower fans, and pumps
- h. Install insulation on water heater tanks and water heating pipes
- i. Install solar water heating systems, provided the structure is not visible from the public right of way
- j. Install waste heat recovery devices, including desuperheater water heaters, condensing heat exchangers, heat pump and water heating heat recovery systems, and other energy recovery equipment
- k. Repair or replace electric motors and motor controls like variable speed drives
- l. Incorporate other lighting technologies such as dimmable ballasts, day lighting controls, and occupant-controlled dimming

***2. Work on heating and cooling systems:***

- a. Clean, tune, repair or replace heating systems, including furnaces, boilers, heat pumps, vented space heaters, and wood stoves
- b. Clean, tune, repair or replace cooling systems, including central air conditioners, window air conditioners, heat pumps, and evaporative coolers
- c. Install insulation on ducts and heating pipes
- d. Conduct other efficiency improvements on heating and cooling systems, including replacing standing pilot lights with electronic ignition devices and installing vent dampers
- e. Modify duct and pipe systems so heating and cooling systems operate efficiently and effectively, including adding return ducts, replace diffusers and registers, replace air filters, install thermostatic radiator controls on steam and hot water heating systems
- f. Install programmable thermostats, outdoor reset controls, UL listed energy management systems or building automation systems and other HVAC control systems

***3. Energy efficiency work affecting the electric base load of the property:***

- a. Convert incandescent lighting to fluorescent
- b. Add reflectors, LED exit signs, efficient HID fixtures, and occupancy (motion) sensors
- c. Replace refrigerators and other appliances

***4. Health and safety measures:***

- a. Installing fire, smoke or carbon dioxide detectors / alarms. Installation of hardwired fire, smoke or carbon dioxide / alarms - no decorative plaster is damaged
- b. Repair or replace vent systems on fossil-fuel-fired heating systems and water heaters to ensure that combustion gasses draft safely to outside
- c. Install mechanical ventilation, in a manner not visible from the public right of way, to ensure adequate indoor air quality if house is air-sealed to building tightness limit

## **APPENDIX B – SEP AND EECBG UNDERTAKINGS EXEMPT FROM SECTION 106 REVIEW**

### **A. Category 1 - No Consultation Required**

In addition to the undertakings provided in *Exhibit A (WAP Undertakings exempt from Section 106 Review)*, DOE and the SHPO have concluded that the following undertakings do not have the potential to cause effects on historic properties per 36 CFR § 800.3(a)(1):

#### ***1. General efficiency measures not affecting the exterior of the building:***

- a. Energy audits and feasibility studies
- b. Weatherization of mobile homes and trailers
- c. Caulking and weather-stripping around doors and windows in a manner that does not harm or obscure historic windows or trim.
- d. Water conservation measures – like low flow faucets, toilets, shower heads, urinals – and distribution device controls
- e. WV Weatherization does not work on driveways, parking areas, and/or walkways.
- f. Excavating to gain access to existing underground utilities to repair or replace them, provided that the work is performed consistent with previous conditions. Excavation for existing underground utilities is performed by power companies, not WV weatherization.
- g. Ventilating crawl spaces
- h. Replacement of existing HVAC equipment including pumps, motors, boilers, chillers, cooling towers, air handling units, package units, condensers, compressors, heat exchangers that do not require a change to existing ducting, plumbing, electrical, controls, or if ducting, plumbing, electrical and controls are on the rear of the structure or not visible from any public right of way. Current pad location must be used. If relocation is required the review will be submitted to WVSHPO for review
- i. Adding or replacing existing building controls systems including HVAC control systems and the replacement of building-wide pneumatic controls with digital controls, thermostats, dampers, and other individual sensors like smoke detectors and carbon monoxide detectors (wired or non-wired). Installation of hardwired fire, smoke or carbon dioxide / alarms - no decorative plaster is damaged
- j. New installation of non-hard wired devices including photo-controls, occupancy sensors, carbon dioxide, thermostats, humidity, light meters and other building control sensors, provided the work conforms with applicable state and local permitting requirements. Installation of hardwired fire, smoke or carbon dioxide / alarms - no decorative plaster is damaged.
- k. Adding variable speed drive motors
- l. Insulation of water heater tanks and pipes
- m. Furnace or hot water tank replacement that does not require a visible new supply or venting

#### ***2. Insulation measures not affecting the exterior of the building:***

- a. Thermal insulation installation in walls, floors and ceilings (excluding spray foam insulation)
- b. Duct sealing, insulation, repair or replacement in unoccupied areas
- c. Attic insulation with proper ventilation; if under an effective R8 - add additional R-19 up to R-38 (fiberglass bat only)



- d. Band joist insulation - R-11 to R19 as applicable
- e. Water heater tank and pipe insulation

**3. Electric base load measures not affecting the exterior of the building:**

- a. Appliance replacement (upgrade to EnergyStar appliances)
- b. Compact fluorescent light bulbs
- c. Energy efficient light fixtures, including ballasts (Replacement)
- d. LED light fixtures and exit signs (Replacement)
- e. Upgrade exterior lighting (replacement with metal halide bulbs, LEDs, or others) along with ballasts, sensors and energy storage devices not visible from any public right of way. This includes the addition of reflectors, LED exit signs, efficient HID fixtures, and occupancy (motion) sensors.

**B. Category 2 - No Consultation Required if SOI Standards are Adhered to and Verified by Qualified Staff, if Applicable**

**1. Efficiency and repair measures:**

- a. Painting over previously painted exterior surfaces, provided destructive surface preparation treatments are not used (such as water-blasting, sandblasting and chemical removal). If painting involves signs or mural, such work will require approval by WVSHPO.
- b. Installation or replacement of downspout extensions, provided that the color of the extensions is historically appropriate for the period and style of the property
- c. Repairing or upgrading electrical or plumbing systems and installing mechanical equipment, in a manner that does not permanently change the appearance of the interior or exterior of the building
- d. Installation of new HVAC equipment (such as pumps, motors, boilers, chillers, cooling towers, air handling units, package units, condensers, compressors, or heat exchangers) in a manner that does not permanently change the appearance of the building.
- e. Integrated shingle-style or thin film solar systems on the rear roof of the structure, behind the parapet or not visible from the public right of way.
- f. Solar systems (including photovoltaic and solar thermal) not visible from the public right of way and if ground-mounted can be installed without ground disturbance and if roof-mounted will not require new building reinforcement.
- g. Wind system additions to existing wind power facilities that will not require ground disturbance and if building mounted will not require building reinforcement.
- h. Lead-based paint abatement in accordance with the *Standards and Preservation Brief #37*
- i. Building cleaning in accordance with the *Standards and Preservation Briefs #1, #6, and #10*
- j. Repairing masonry, including re-pointing and rebuilding chimneys in accordance with the *Standards and Preservation Brief # 2*
- k. New lighting controls including photo-sensors and shading elements if not visible from the public right of way
- l. New metering devices in a manner that does not permanently change the appearance of the interior or exterior of the building, or if the addition is on the exterior of the structure and is not visible from the public right of way
- m. New water efficient fixtures and fittings in a manner that does not permanently change the appearance of the interior or exterior of the building

## ***2. Installation or repair of roofing, siding, and ventilation:***

- a. White Roofs, Cool Roofs, Green Roofs, Sod or Grass Roofs not visible from the public right-of-way
- b. Rainwater catches and/or gray water systems not viewable from the public right of way
- c. Repair or replacement of existing exterior siding provided that new siding closely resembles the existing siding in dimension, profile and texture. Situations calling for replacement of exterior siding will be sent to WVSHPO for review and approval. Photo documentation will be provided by Recipient
- d. Flat or shallow pitch roof replacement (shallow pitch is defined as a pitch with a rise-to-run ratio equal to or less than 3" to 12") with no part of the surface of the roof visible from the ground or in a manner not visible from the public right of way.
- e. Roof repair or replacement with materials that closely resemble the historic materials and form, or with replacement materials that are close to the original in color, texture, composition and form to restore the original feature based on historic evidence, and in a manner that does not alter the roofline
- f. Installing vents (such as continuous ridge vents covered with ridge shingles or boards, roof vents, bath and kitchen vents, soffit and frieze board vents or combustion appliance flues) if not located on a primary roof elevation or not visible from the public right-of-way
- g. Installing foundation vents, if painted or finished to match the existing foundation material.

## ***3. Windows and doors:***

- a. Installing storm windows, storm doors or wood screen doors in a manner that does not harm or obscure historic windows, doors or trim
- b. Installing insulated exterior replacement doors where the door openings are not altered and are not visible from the public right-of-way
- c. Window or glazing treatments that do not change the appearance of the interior or exterior of the building, or if the addition is on the exterior of the structure