

**U.S. Department of Energy  
WEATHERIZATION ASSISTANCE PROGRAM  
STATE PLAN MASTER FILE  
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## V.1 Eligibility

### V.1.1 Approach to Determining Client Eligibility

#### **Definition of Income Eligibility**

Maine has chosen to use the definition of household income, as described in the Home Energy Assistance Program Rule. Household income includes, but is not limited to, the following: wages, salaries, and bonuses before any taxes or deductions; self-employment income, social security benefits; unemployment and worker's compensation and/or strike benefits from union funds; alimony, child support, or mortgage/rent payments in lieu of or in addition to support payments; military family allotments; veteran's benefits; other support from an absent family member or someone not living in the household, including loans if received within the income verification period; income of person living in the household who is a non-qualified alien and 18 years of age or older; government employee pensions, private pensions, and regular annuity payments; income from dividends, rents, royalties, estates, trusts, and interest; foster care payments if the foster child/adult is a Client on the date of application; adoption subsidy; net rental income, including funds from roomers and boarders; lottery winnings; work study; TANF, including Gap, Pass-Through, and ASPIRE, or any other regular support from a government or private agency; capital gains; jury duty fees; assets drawn down from financial institutions when used for expenditures and not reinvested; and rent received in lieu of wages.

#### **Household Eligibility Basis**

Maine has chosen the following definition of low income for the basis of eligibility for the Weatherization Assistance Program (WAP): Low income means that income in relation to household/family size is at or below 200% of the poverty level determined in accordance with criteria established by the Director of the Office of Management and Budget.

#### **Qualified Aliens**

A household may include (a) an alien who has obtained the status of an alien lawfully admitted for temporary residence under Section 210 of the Immigration and Nationality Act by approval of an application and are categorized as Special Agricultural Workers (SAWS) who perform seasonal agricultural work during a specified period of time; or (b) an alien who has obtained the status of an alien lawfully admitted for temporary residence under Section 245A and 210A of the Immigration and Nationality Act by approval of an application and who is aged, blind and/or disabled as defined in Section 1414 (a)(1) of the Social Security Act (Public Law 74271); or (c) Cuban or Haitian aliens as defined in Public Law 96422, Section 50I(e). Clients are considered eligible if they have a "Green Card" or show permanent residence (I-551 Alien Registration Card, Passport, I-688 Employment Authorization Card, I-766 Employment Authorization Document, I-94 with R-1 or R-2 status designation).

### V.1.2 Approach to Determining Building Eligibility

#### **Eligibility/Documentation**

In order for weatherization to be completed on a unit, the household members must meet one of the following eligibility criteria to assure compliance with the requirements of 10 CFR 440.22:

- A dwelling unit shall be eligible for weatherization assistance if it is occupied by a household that meets the eligibility for assistance under the Low Income Home Energy Assistance Act of 1981 as determined in accordance with criteria established by the Director of the Office of Management and Budget.
- Prior to weatherizing entire multi-family housing units, a specific eligibility test will be applied. Not less than 66%(or 50% in the case of multifamily units of 2 or 4 dwelling units), must be eligible or

must become eligible dwelling units within 180 days under a federal, state or local program for rehabilitating the building or making similar improvements to the building.

Subgrantee files and records contain authorized LIHEAP applications with income verification, *Consent Form, Proof of Ownership* and *Landlord/Tenant Agreement* (if applicable). All documents are available for review by state or federal staff as needed.

### **Reweathering Compliance**

Maine allows units previously weatherized under this part or under other federal programs prior to September 30, 1994 to receive further financial assistance for weatherization under Maine's WAP. Maine requires that these units be reported separately. Each dwelling unit served must receive a completely new energy audit that takes into account any previous energy conservation improvements to the dwelling. Subgrantees are allowed to count these homes as completions for the purposes of compliance with the per-home expenditure limit in 10 CFR 440.18

The Maine State Housing Authority (MaineHousing) maintains available data of previously weatherized homes and assists Community Action Agencies (CAAs) in determining compliance with the re-weatherization requirements as requested throughout the year.

### **Eligible Structures**

Maine's Weatherization Assistance Program (WAP), which is being utilized statewide, consists of the following components: an individual audit for each dwelling unit; energy savings calculations based on ASHRAE fundamentals; and a comprehensive health and safety protocol. Prior to initiating any weatherization activities, Subgrantees are required to evaluate:

- 1) the physical condition of the home,
- 2) the mechanical systems, and
- 3) building tightness.

If homes fail to meet minimum standards as to Structural Integrity and Health & Safety, weatherization must be deferred until the issue is resolved. See *Maine's Deferral of Services Policy*.

Information gained is used first to evaluate the physical condition of the home and its mechanical systems. This evaluation includes blower door tests, combustion efficiency analysis, minimal ventilation assessment, fossil fuel appliance CO testing and moisture level evaluation. Results determine the necessity for various remedial actions, which must be accomplished prior to weatherization as well as reasonable investment levels. Blower door testing also pinpoints air sealing work, determines the actual air barrier, documents existing ventilation, determines the necessity for duct sealing and system balancing and helps establish the building tightness limit. Post measures testing evaluates indoor air quality, measures effectiveness and fossil fuel appliance safety.

Maine's health and safety procedures as described in the *Maine Weatherization Standards Manual* requires a total assessment of the home. Briefly, and not all inclusive, by use of the *Hancock Software Audit Tool (HEAT/Enterprise)* the auditor is first required to assess the home from basement to attic, listing possible pollutant sources and recording any observable pollutant indicators, interview the client as to health problems and lifestyle, test all combustion appliances to the degree allowed by law as to efficiency, and pollutant production, do pressure differential testing if applicable, calculate the requirements for combustion air and assess the adequacy of the existing combustion air supply, test for spillage and back-drafting, assess venting capability of all combustion exhaust vents, and finally, check for CO production of all combustion appliances. Homes which fail combustion safety tests must be deferred until corrective action is taken. Homes with unvented fossil fuel heaters cannot be weatherized, unless ANSI approved and used as secondary heat only, until their use is discontinued.

Also, no weatherization activity which will affect the drying capability of the home may be undertaken until all necessary moisture control activities have been completed. After the weatherization measures are completed, the home must be checked once again to ascertain that all combustion appliances are operating safely.

### **Rental Units/Multifamily Buildings**

Maine's goal for the weatherization of multifamily units is for the low income tenants to receive a direct benefit. For the purpose of this policy, multifamily properties are those with four (4) or less units. One of the units may be occupied by the owner. MaineHousing, consistent with Department of Energy guidance, requires the weatherization of the entire building not just the low income units. The amount available to weatherize the entire building is equal to the maximum dollar amount that may be spent weatherizing the low income units. There are many positive outcomes that result from weatherization; tenant comfort, preservation of affordable housing, and carbon reductions to name a few. However, there is so little money compared with the need that the focus must remain on properties where the low income tenants see a direct financial benefit. Multi-family units will be prioritized similar to single family: tenants with the highest energy use and highest energy burden (as a percentage of income) will receive priority. Weatherization Assistance Program (WAP) funding may be used to weatherize multifamily provided at least 66% of residents in the property (determined on a building-by-building basis in a multi-building property) must meet WAP income guidelines.

MaineHousing will calculate the multifamily cap using the housing tenure indicated in the most recent LIHEAP or Comprehensive Housing Affordability Strategy data available (whichever is more favorable). For properties with more than one building and a common owner, each building will be considered separately in determining whether the structure will or will not count towards the multifamily caps. Weatherization of building structures with one unit (including single-family attached homes such as townhouses, even if part of a larger multifamily property, which are separated by a full ground-to-roof wall) and building structures with 2-4 units (including stacked duplexes and triple deckers) do not count towards the multifamily caps.

Prior to conducting the energy audit, the Subgrantee must verify the ownership of the unit/building and secure landlord's/owner's and tenant's consent, in writing, to proceed with weatherization services measures. Additionally, the landlord and tenant are required to sign a *Weatherization Rental Agreement* before the Subgrantee can proceed with weatherization. The provisions of this agreement include:

- **Rent Increases**: Prohibits an increase for twelve (12) months because of any increase in the value of the property due solely to the weatherization work.
- **Sale of Property**: If the property is sold within one (1) year of the completion of weatherization work, the owner must reimburse the Subgrantee for the cost of the weatherization material installed.

Before proceeding with multi-family weatherization, Subgrantees must contact MaineHousing's Department of Energy and Housing Services (EHS) providing specific details on the property in question, including property address, project name, and how the property meets priority requirements. EHS will research the project and, if appropriate, provide clearance to move forward. If a Subgrantee weatherizes without approved clearance and EHS subsequently determines the project is in MaineHousing's portfolio, is financed/owned by a Subgrantee, or sufficient reserves are in place for the project to incur these costs, MaineHousing has the right to refuse to reimburse for weatherization costs incurred.

### **Deferral Process**

Deferral of Services Policy: If homes fail to meet minimum standards as to Structural Integrity and Health & Safety, weatherization must be deferred until the issue is resolved. Documentation of all activities in the client's file is required. "Deferral" does not necessarily mean that the home will not receive weatherization services but that until the conditions are rectified, the weatherization services are temporarily postponed. Deferral may be required if the auditor determines that any health and safety or structural conditions exist which may endanger the health and/or safety of the workers or occupants. In such cases, the use of other existing resources such as MaineHousing's Home Repair Program will be explored. Work on a deferred unit will not commence until existing dangerous conditions have been corrected. In addition units located in an area slated for development may need to be deferred to ensure that resources are not wasted on a unit slated for demolition or relocation. WPN 11-6 will serve as guidance in the deferral process. Unfortunately, there may be extreme cases where the problem is beyond the scope of the available funding and/or a case where the client/owner is not willing to cooperate. In either case the Subgrantee must determine what is in the best interest of all concerned and proceed accordingly, ensuring appropriate documentation is in the client file.

### **V.1.3 Definition of Children**

Definition of children (below age): 2 years (24 months)

### **V.1.4 Approach to Tribal Organizations**

The low-income members of an Indian tribe shall receive benefits equivalent to the assistance provided to other low-income persons within Maine. Maine allocates funds to five tribal organizations based upon the number of eligible LIHEAP clients. This has resulted in three percent of Maine's DOE grant award being allocated to the five tribes. Actual administration of the weatherization programs in the tribal organizations is provided by neighboring Community Action Agencies.

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

In the case of areas currently served by a Community Action Agency (CAA) established under Section 222(a)(12) of the Economic Opportunity Act of 1964, as amended, funds available under this program will be granted to that CAA as the Subgrantee for the same geographic area. Any new or additional Subgrantees shall be selected at a hearing in accordance with 10 CFR Section 440.14(a), as amended, and upon the basis of the criteria set forth in 10 CFR 440.15(a), as amended.

Maine WAP serves all counties statewide through nine (9) Subgrantees. Each Subgrantee is, in fact, a CAA or other public or non-profit entity.

The Grantee ensures that each Subgrantee is selected on the basis of public comment received during a public hearing conducted pursuant to 440.14(a) and other appropriate findings regarding:

- a. The Subgrantee's experience and performance in weatherization or housing renovation activities;
- b. The Subgrantee's experience in assisting low-income persons in the area to be served; and
- c. The Subgrantee's capacity to undertake a timely and effective weatherization program.

In selecting a Subgrantee, preference is given to any CAA or other public or non-profit entity which has, or is currently administering, an effective program under this part or under Title II of the Economic Opportunity Act of 1964. Program effectiveness is evaluated by consideration of factors including, but not necessarily limited to the following:

- a. The extent to which the past or current program achieved or is achieving weatherization goals in a timely fashion;

- b. The quality of work performed by the Subgrantee;
- c. The number, qualifications, and experience of the staff members of the Subgrantee; and
- d. The ability of the Subgrantee to secure volunteers, training participants, public service employment workers, and other federal or state training programs.

### **V.3 Priorities for Service Delivery**

Priority for weatherization services will be identified through the use of MaineHousing's high energy use/energy burden list, which lists LIHEAP eligible households and their annual energy consumption usage for heat. Households that include elderly, disabled and/or a child below age two (2) are identified from the list. This information becomes the basis for determining production targets and wait lists. The numbers of elderly, handicapped and families with children below age two (2) are converted into percentages of the entire waiting list which should correlate to production data. The percentage of owner-occupied and renter-occupied units weatherized should also correspond to their percentage of the waiting list. Subgrantees have the option to further prioritize services to high energy use/energy burden consumers by submitting specific plans during the work plan and budget approval process.

### **V.4 Climatic Conditions**

According to a chart titled *District Heating Factors for the United States*, Maine's climatological conditions vary between 1.75 in Southern Maine to 2.25 in Northern Maine. This ranking demonstrates the severity of Maine's winters, as well as the actual number of heating degree days. The Grantee, in order to meet the additional energy needs of those in the northern and western portions of Maine, has used a sliding scale of allocation based on actual heating degree-days.

Maine's Energy Audit Tool (*HEAT/Enterprise*) accounts for localized climatic variances by using weather data from the National Oceanic and Atmospheric Administration (NOAA). Heating degree hours are calculated using weather station data associated with each Maine zip code.

Maine's 7500 to 9800 degree day environment mandates consideration of heating needs. Conversely it makes cooling needs insignificant, thus only heating needs are considered in Maine.

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

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

Standards for the proper installation of materials and procedures are described in the *Maine Weatherization Standards Manual*, which is located on the MaineHousing website <http://www.mainehousing.org/docs/default-source/energy/energy-meexstandards.pdf?sfvrsn=2>; printed copies will be available to Subgrantees.

Measures to be performed will be prioritized in accordance with the Maine audit system, installed in accordance with the standard work specifications (SWS) contained in the *Maine Weatherization Field Guide*, and will be compliant with WPN 15-4. A copy of the *Maine Weatherization Field Guide* has been posted on MaineHousing's Website; printed copies have been distributed to Subgrantees.

The Maine Weatherization Standards are aligned with the companion *Maine Weatherization Field Guide*, which embodies the Standard Work Specifications applicable to the Maine weatherization program. While the Maine Weatherization Standards and the *Maine Weatherization Field Guide* are fully aligned, the two documents are distinct. The Maine Weatherization Standards provides more overview and detail on overarching goals and guidance for delivery of weatherization services. The *Maine Weatherization Field Guide* format provides clear quality standards for specific measures and

test procedures using concise SWS language and photographs, and is well suited for direct use in the field.

All Subgrantee Agreements will contain the following language: “*Subgrantee agrees to ensure that the standard work specifications for work quality outlined in WPN 15-4, Section 2, will be met and that all contracts with vendors will contain the same requirement.*” The Subgrantee’s signature on the Agreement confirms that all expectations contained in the Agreement are understood and agreed to. The Subgrantee must deliver the executed Agreement to the Grantee before WAP funds will be disseminated.

All weatherization work is performed in accordance to DOE approved energy audit procedures and 10 CFR 440 Appendix A.

## **V.5.2 Energy Audit Procedures**

Audit Procedures and Dates Most Recently Approved by DOE

Single-Family 12/5/2016

Manufactured Housing           

Maine's energy audits consists of the following components:

- an individual audit for each dwelling unit,
- energy savings calculations based on ASHRAE fundamentals, and
- a comprehensive health and safety protocol.

Prior to initiating any weatherization activities, Subgrantees are required to evaluate:

- 1) the physical condition of the home,
- 2) the mechanical systems, and
- 3) building tightness.

Maine's health and safety procedures as described in the *Maine Weatherization Standards Manual* and *Maine Weatherization Field Guide* require a total assessment of the home. Briefly, and not all inclusive, by use of *HEAT/Enterprise* the auditor is first required to assess the home from basement to attic, listing possible pollutant sources and recording any observable pollutant indicators, interview the client as to health problems and lifestyle, test all combustion appliances to the degree allowed by law as to efficiency and pollutant production, do pressure differential testing if applicable, calculate the requirements for combustion air and assess the adequacy of the existing combustion air supply, test for spillage and back-drafting, assess venting capability of all combustion exhaust vents, and finally, check for CO production of all combustion appliances. Homes which fail combustion safety tests must be deferred until corrective action is taken. Homes with unvented fossil fuel heaters cannot be weatherized, unless ANSI approved and used as secondary heat only, until their use is discontinued. Also, no weatherization activity which will affect the drying capability of the home may be undertaken until all necessary moisture control activities have been completed. After the weatherization measures are completed, the home must be checked once again to ascertain that all combustion appliances are operating safely.

If homes fail to meet minimum standards as to Structural Integrity and Health & Safety, weatherization must be deferred until the issue is resolved. Documentation of all activities in the client file is required.

Maine WAP standard work specifications are embodied in the *Maine Weatherization Field Guide* and is posted on the MaineHousing website. This measures selection system applies to all types of dwelling

units and is based on instrumented audits interacted with ASHRAE 62.2–2013 based calculations for energy use, actual installation and energy costs and material lifetimes to produce a SIR-driven work order. These calculations will be conducted using *Enterprise*.

Maine requires Subgrantees to utilize, to the degree allowed by law, among other instrumentation: blower doors, combustion analysis equipment, hygrometers, CO analyzers, and digital manometers. Infrared and CO analyzers are employed at the Grantee and Subgrantee level for technical assistance and assessment. Mandated tests include blower door tests, combustion efficiency analysis, minimal ventilation assessment, fossil fuel appliance CO testing and moisture level evaluation.

Maine's *HEAT/Enterprise* uses the basic heat loss equation for conductive heat loss, (BTU/hr times area times degrees Fahrenheit over "R") taken from the 62.2–2013 ASHRAE Fundamentals Handbook, for pre and post weatherization energy use. Included in the calculations are heating degree day correction factors and a blower door "N" factor when necessary. The results are checked against actual consumption whenever possible (LIHEAP vendors are required to provide consumption data; clients are asked to provide fuel bills during the audit). As the database grows any necessary adjustments to our correction factors will be made. Maine's energy audit calculates savings to investment ratios for each contemplated weatherization measure, which reflect local heating degree day figures and a heating degree day correction factor.

Material lifetimes used are the most conservative generally accepted by the industry. Material lifetimes were established by consensus of Maine's Community Action Agency Building Technical Committee when developing the algorithms used for the energy savings factors. In *HEAT/Enterprise*, these lifetimes were updated based on DOE input. Installation costs are established by using actual subcontractor and supplier bids as well as crew installation costs at each Subgrantee.

An SIR is calculated for each contemplated measure. Measures are arranged in descending order of payback by the computer program with any individual measure with a SIR of less than 1 being considered "unallowable" unless paid for with another funding source (non-DOE). It is possible for the Subgrantee to elect to do fewer measures than proposed on any given job as long as measures are accomplished in the order established by the computer program. However, this is not the preferred practice considering that a home may only be weatherized with DOE funds once in a lifetime, unless weatherized prior to September 30, 1994.

Projected incidental repair costs are also calculated and added to the total cost. Incidental repair costs are capped at 15% of the total cost of weatherization tasks being completed (conductive + air infiltration + mechanical tasks) in a contract period. Overall calculated SIR for activities excluding health and safety must be equal to or greater than 1. Maine's audit system is unique in that it assigns an energy savings to air leakage reduction as determined by reduction of the CFM50 figure from blower door testing. As there is no way to accurately predict a post weatherization CFM50 figure, Grantee may waive the SIR requirement for the aggregate of air infiltration measures on a case-by-case basis if the overall payback requirement is not met by the post test.

All weatherization work is performed in accordance to DOE approved energy audit procedures and 10 CFR 440 Appendix A.

### **V.5.3 Final Inspection**

Every DOE WAP unit reported as a completed unit receives a final inspection by the Subgrantee's BPI certified Quality Control Inspector (QCI), to ensure that all work meets the minimum standard work specifications as outlined in the *Maine Weatherization Field Guide* in accordance with 10 CFR 440. The QCI must complete and provide an *Inspection Completion Form* to Grantee for every completed unit,

certifying that the weatherization materials and measures were properly installed in accordance with the Maine WAP standards.

Grantee has three monitors who conduct desk reviews on all completed jobs and will only authorize payment to the Subgrantee when satisfied that all work is completed in accordance with the work quality requirements outlined in WPN 15-4, Section 1. The Subgrantee is notified of any jobs not in compliance and is required to take the steps necessary to complete the job. In addition, the Grantee will perform quality assurance reviews of at least 10% of all completed units.

Subgrantee Agreements outline disciplinary action for inadequate inspection practices and as well as other duties not performed in accordance with expectations contained in the Agreement. To wit: MaineHousing shall notify the Subgrantee of the respects in which the Subgrantee's performance is deficient and the time period Subgrantee has to conform its performance. In the event the Subgrantee fails to correct deficiencies in its performance within the specified time, MaineHousing may withhold Subgrantee's funding under the Agreement until Subgrantee is in compliance.

If a Subgrantee weatherizes without approved clearance and EHS subsequently determines the project is in MaineHousing's portfolio and is financed/owned by a Subgrantee, or sufficient reserves are in place for the project to incur these costs, MaineHousing has the right to refuse to reimburse for weatherization costs incurred.

## **V.6 Weatherization Analysis of Effectiveness**

Subgrantees operated successfully throughout the previous grant period. Maine's WAP procedures are working well at all Subgrantees. Estimated energy savings calculations and reports are produced by *HEAT/Enterprise* which also prioritizes all activities in all types of housing addressed by the DOE Weatherization Program.

In addition MaineHousing provides a survey to all recipients of weatherization services, seeking seek feedback on the effectiveness of the installed measures. Results are shared with Subgrantees performing the work.

## **V.7 Health and Safety**

The primary goals for Maine WAP are to implement cost effective weatherization procedures to conserve energy and to assess and correct related health and safety hazards. Materials used for the abatement of such hazards not listed in Appendix A of 10 CFR 440 must meet all standards incorporated by reference and made a part of Part 440.

Subgrantees will be allowed to expend program funds for the abatement of energy related health and safety hazards up to an average of \$1,200 per unit. Grantee health and safety related costs will be charged to either the administrative or training and technical assistance cost category.

Subgrantees must manage to the \$1,200 average over the life of the grant. This allows flexibility to shift funds from homes that need little or no hazard abatement or have benefited from other leveraged monies to homes that have no other resources. It will be the responsibility of the Subgrantee to manage health and safety expenditures, which Subgrantees report to MaineHousing monthly as part of the billing process. The health and safety costs are excluded from the cost effective calculations of the remaining unit expenditures and must be tracked separately. Health and safety measures not producing an energy savings factor will be reported as a separate line item on the *DOE Weatherization Reporting Form*.

The cost of eliminating health and safety hazards, which is necessary before or because of installation of weatherization materials, is an allowable expense. Subgrantees will be encouraged to leverage other funds whenever possible when addressing non-cost effective tested items. Problems with the dwelling unit that have

no connection with weatherization activities can only be addressed with other funding sources, such as MaineHousing's *Lead Hazard Reduction Demonstration Grant*, or its *Home Repair Program*. Potential funding sources include, but are not limited to:

- Central Heating Improvement Program (CHIP)
- CDBG
- MaineHousing Housing programs
- City or Town assistance
- USDA Rural Economic Development (formerly FHA)
- HUD
- Local church and community groups
- Building Materials Bank
- Habitat for Humanity
- Donations from local businesses
- Landlords

### **Client/Owner Education**

The client/owner education component of the Health and Safety Program is included with the overall Client/Owner Education. Per the *Maine Weatherization Standards Manual*, the auditor's duties include an evaluation of available information starting with viewing the client application, interviewing the client, and assessing the dwelling. A series of tests as outlined in the *Maine Weatherization Standards Manual* and the *Maine Weatherization Field Guide* are performed in order to identify potential health and safety hazards as well as energy conservation opportunities. As outlined in WPN 11-6, the auditor makes the client aware of potential hazards and provides them with appropriate instructions and educational materials. The client also receives guidance and information on conservation tips, both verbally and through educational materials relating to the subject(s). Some of the educational pamphlets available include but are not limited to:

- *Combustion Appliances and Indoor Air Pollutants* (published on the US Environmental Protection Agency website)
- *The Inside Story - A Guide to Indoor Air Quality* (published on the US Consumer Product Safety Commission website).
- *An Introduction to Indoor Air Quality: Indoor Air Pollution And Health* (published on the US Environmental Protection website)
- *Consumer's Guide to Radon Reduction* (published on the US Environmental Protection Agency website and available on MaineHousing's website)
- *Indoor Air Pollution - An Introduction for Health Professionals* (published on the US Environmental Protection Agency website)
- *Indoor Air Quality Management Checklist* (published on the US Environmental Protection Agency website)
- *A Brief Guide to Mold, Moisture and Your Home* (published on the US Environmental Protection Agency website and available on MaineHousing's website)

- *The Lead-Safe Certified Guide to Renovate Right* (published on the US Environmental Protection Agency website and available on MaineHousing's website)
- *Energy Saver Guide: Tips on Saving Money and Energy at Home* (published on the Department of Energy website)
- *Building Air Quality Guide: A Guide for Building Owners and Facility Managers* (published on the US Environmental Protection Agency website and available on MaineHousing's website)
- *Learn about Asbestos* (published on the US Environmental Protection Agency website)
- *Spray Polyurethane Foam (SPF) Insulation and How to Use it More Safely* (published on the US Environmental Protection Agency website)
- *Best Practices & Safety Tips for Weatherizing with Spray Polyurethane Foam* (published on the US Environmental Protection Agency website and available on MaineHousing's website)
- There are also energy conservation educational videos and case studies available that discuss weatherizing homes, as well as health and safety and other conservation issues.

The clients sign a Consent Form which specifies that "In consideration of any WAP services received, I have received a copy of the EPA publication *The Lead-Safe Certified Guide To Renovate Right* and have also been educated on weatherization and health and safety topics pertinent to my home".

Client Education continues as the home is being weatherized. Crews, contractors, inspectors and other qualified personnel explain various related concepts as the work progresses. Clients are always encouraged to contact appropriate agencies after weatherization if they have any questions, concerns, or wish to report feedback on the conservation efforts.

### **Deferral of Services Policy**

When conditions are discovered that are too hazardous for the client or weatherization personnel for weatherization procedures to commence, a deferral of services policy has been developed. "Deferral" does not necessarily mean that the home will not receive weatherization services but that until the conditions are rectified, the weatherization services are temporarily postponed. Subgrantees must attempt to refer the client to alternative resources. Once rectified, the home can be weatherized. Unfortunately, there may be extreme cases where the problem is beyond the scope of the available funding and/or a case where the client/owner is not willing to cooperate. In either case the Subgrantee must determine what is in the best interest of all concerned and proceed accordingly, ensuring appropriate documentation is in the client file. See *Deferral of Services Notice* section of this document.

### **Grantee Health and Safety Program**

Grantee health and safety related costs will be charged to either the administrative or training and technical assistance cost category. Grantee must follow all Occupational Safety and Health Administration (OSHA) safety regulations, and national, state and local codes as further described under Agency/Contractor Safety.

### **Agency/Contractor Safety**

Subgrantees must comply with OSHA requirements in all weatherization activities. When contractors are employed by local agencies those contractors are expected to comply with OSHA requirements as well. The contractor costs to comply with OSHA, as applicable, are part of the bid price. Related costs

for Subgrantees to comply with OSHA requirements may be charged under section 440.18 as health and safety, tools and equipment, incidental repairs, etc.

The Maine Weatherization Program expects the crews, contractors, and other field personnel to be able to work under conditions that do not jeopardize their own health and safety.

Weatherization personnel shall be properly trained in workplace safety and will be provided with necessary protective equipment. All weatherization workers must comply with EPA's *Renovation, Repair and Painting Rule* (RRP) and at least one person on each weatherization crew (includes both subcontractor crews and Subgrantee direct hires) must be trained in leadsafe weatherization.

Subgrantees and contractors are expected to follow the requirements of Construction Industry OSHA Safety and Health Standards (29 CFR 1926/1910). Some of the standards include but are not limited to:

- Lead in Construction 1926.62
- How to Prepare for Emergencies in the Workplace
- Employees Guide to: Respirator Safety
- Personal Protective Equipment
- Machine Guarding and Hand and Power Tool Safety
- Hazardous Waste and Emergency Response
- Ladders 1926.1053
- Scaffolds 1910.28
- Electrical Safety

Subgrantees must comply with the OSHA Hazard Communication "Right To Know Program." The program requires chemical manufacturers or importers to assess the hazards of chemicals which they produce or import. It also requires that all employers provide information to their employees about the hazardous chemicals to which they are exposed, by means of a hazard communication program, labels and other forms of warning, material safety data sheets, and information and training. Subgrantees must follow the record keeping requirements for Occupational Injuries and Illnesses.

Subgrantees are responsible for maintaining agency vehicles so that they are in safe and proper operating condition.

Subgrantees are responsible for ensuring all work performed in client homes abides by federal, state, and local codes and regulations.

MaineHousing verifies contractor and Subgrantee compliance with OSHA 10 & 30, MSDS, LSW, and RRP requirements as follows:

- As part of the annual bid process, contractors are required to submit LSW and RRP certifications. MaineHousing reviews this documentation to ensure compliance.
- MaineHousing conducts in-progress monitoring inspections to verify compliance with OSHA 1910 and 1926, LSW, RRP, and reviews/compares MSDS information to actual products being installed.
- MaineHousing conducts client interviews to confirm that they received MSDS information prior to the installation of WAP measures.

### **Client Health and Safety**

Client health and safety is a priority for Maine's Weatherization Assistance Program. Through DOE trainings, related trainings at Maine Safety Works , and field training, Maine has developed a comprehensive plan to ensure safety in energy related areas. Subgrantees are required to have the proper equipment to perform the necessary weatherization tests. Agency personnel are required to attend trainings as determined necessary. Homes constructed prior to 1978 are presumed to contain lead paint. All weatherization clients residing in homes constructed prior to 1978 will receive the EPA publication *The Lead-Safe Certified Guide to Renovate Right* at least 10 days prior to the commencement of any weatherization activities.

Maine's Community Action Agency Building Technology Committee meets on a monthly basis to discuss all aspects of the weatherization program. The committee consists of a technical representative from each Subgrantee. Through this venue Subgrantees are continually updated with information and techniques regarding energy conservation and health and safety issues. This system ensures that all Subgrantees are receiving the same information and creates consistency for a quality program statewide.

The Weatherization and CHIP programs work in unison to guarantee "A House as a System " approach when conducting an audit.

All Subgrantees have blower doors, digital manometers, CO testers, heating system efficiency testers, and hygrometers, as well as other test equipment. All weatherization personnel are required to be trained in energy related health and safety issues and indoor air quality problems. Testing and corrective procedures requiring special licensing on a state level will be referred to the appropriate authority.

Maine uses the *Types of Hazards and Corrective Procedures Chart* (adopted in DOE Notice 11-6) as a quick reference of a majority of conditions that Maine regards as hazardous. In all cases these conditions will determine the course that weatherization will take. The chart outlines the hazard, the importance of correction, if postponement of weatherization services is necessary, types of testing, and corrective procedures for each hazard.

### **Asbestos**

"Asbestos" describes six naturally occurring fibrous minerals found in certain types of rock formations. When mined and processed, asbestos is typically separated into very thin fibers that are normally invisible to the naked eye. They may remain in the air for many hours if released from asbestos - containing material and may be inhaled at this time. Three specific diseases - asbestosis (a fibrous scarring of the lungs), lung cancer, and mesothelioma (a cancer of the lining of the chest or abdominal cavity) - have been linked to asbestos exposure. It may be 20 years or more after the exposure before symptoms of these diseases appear; however, high levels of exposure can result in respiratory diseases within a shorter period of time.

According to the EPA's *Building Air Quality Guide*, the mere presence of asbestos in a building does not mean that the health of a building occupant is endangered. Asbestos-containing material in good condition, not damaged or disturbed, is not likely to release asbestos into the air.

In residential homes asbestos was generally used as an insulating material on heating systems, steam and hot water pipes, and duct work. Asbestos usually appears as a white-caulk type of substance used in a plaster form or contained in corrugated insulation sleeves.

Asbestos in siding, walls, and ceilings: DOE WAP funds may be used to remove/replace asbestos siding for purposes of wall cavity insulation, if allowed by state and local codes. Weatherization personnel are advised to identify and assess the condition of asbestos during the audit process and to

take all precautions not to disturb asbestos-containing materials throughout the weatherization process. Subgrantee must inform the client/owner that suspected asbestos siding is present and what precautions will be taken.

Asbestos in vermiculite: DOE WAP funds may be used for encapsulation by an appropriately trained asbestos control professional. Removal is not allowed. Subgrantee must instruct clients/owner not to disturb suspected asbestos containing material. Additionally the Subgrantee must provide asbestos safety information to the client.

Asbestos on pipes, furnaces: DOE WAP funds may be used for encapsulation by an AHEARA asbestos control professional. Subgrantee must instruct clients/owners not to disturb suspected asbestos containing material. Additionally the Subgrantee must provide asbestos safety information to the client.

DOE WAP funds cannot be used for asbestos removal with the exception cited above. Major asbestos problems should be referred to the appropriate state agency and/or EPA.

If the Subgrantee suspects the presence of asbestos, they must provide client/owner education about asbestos and the precautions that will be taken.

### **Biologicals/Mold**

DOE WAP funds can be used to remediate conditions that may lead to or promote biological concerns and unsanitary conditions. DOE WAP funds cannot be used for the removal of mold, odors, viruses, bacteria, and unsanitary conditions. Deferral will be necessary in those situations where a known agent is present in the home that may create a serious risk to weatherization workers or household occupants. Subgrantee must inform client/owner of observed conditions and provide information on how to maintain a sanitary home and steps to correct deferral condition.

### **Moisture**

A thorough moisture assessment of the home is done during the audit process and conditions are noted in *HEAT/Enterprise*. The usual sources of moisture problems are:

- a. Interior moisture generated by households behavior (showering, cooking, floor washing, use of unvented combustion appliances, etc.).
- b. Interior moisture migrating up through the house from damp basements or dirt crawl spaces and indoor firewood storage, typical in Maine.
- c. Bulk moisture entering from the exterior of the house from shell problems.

The more airtight a house is the less air changes per hour occur, consequently lessening the ability to dry out the humid indoor air. Although a tight home is good for energy conservation purposes, it can be a problem if there is no way to exhaust the moisture that is produced and trapped inside the house. In colder climates, interior moisture that escapes through holes or bypasses can cause structural degradation by condensing on cold outer surfaces, slowly rotting the wood. Moisture can condense on cold interior surfaces that are not insulated properly or that are deprived of heat circulation. This is generally the root of the biological problems and structural problems relating to weatherization activities.

1. The assessment process is as follows:

- The Client Interview: The auditor asks a series of questions about household activities, household's health, landscape problems, and structural problems that may indicate moisture problems.

- Visual Inspection: The auditor starts the assessment process upon driving up to the house. Condensation on windows, a buckling roof, lack of gutters, ground sloping towards the house, and peeling paint are just some of the indications of trouble. Inside the house, musty smells, mold and mildew, blackening roof sheathing, plumbing leaks, and damp basements are additional signals of moisture problems the auditor records in *HEAT/Enterprise*.
- Measuring Humidity Levels: The auditor uses either a sling psychrometer or a digital hygrometer to measure humidity levels in different portions of the house.
- Blower Door Testing: A blower door test is done to determine the tightness of the house as well as assessing leakage areas. It is understood that the chart and the formulas quantify tightness limits to ensure adequate fresh air for people to breathe in normal living conditions. The limits do not allow for poor indoor air quality or guarantee adequate combustion air for appliances.

## 2. Corrective procedures and recommendations:

- Client Education: Subgrantee must provide client/owner notification and disclaimer on mold and moisture awareness.
- Eliminate/Reduce Source: utilizing moisture control activities such as groundcovers, sealing shell bypasses, diverting bulk moisture, sump pumps, etc.
- Mechanical Ventilation: exhaust only, fresh air intakes, balanced mechanical whole house ventilation systems.

### **Combustion Appliances and Combustion Gasses**

MaineHousing recognizes that combustion gases in homes pose the most serious hazard. As a result, MaineHousing has adopted a comprehensive plan to ensure safe operation of combustion appliances and to make sure that weatherization procedures do not contribute to a problem.

It is MaineHousing policy that oil-fired heating combustion appliances in homes to be weatherized must have been serviced within the previous 12 months; and gas-fired heating combustion appliances must have been serviced within the previous 24 months, of the audit date. Documentation must be provided to show the service date. Any heating combustion appliances that do not meet this requirement must receive a Clean Tune and Evaluate (CTE) by a licensed heating technician.

Some of the harmful products of combustion are dust, nitrogen oxides, and carbon monoxide. While all of these products are harmful, carbon monoxide (CO) is deadly. CO is a highly toxic, lighter than air gas that is produced when there is insufficient oxygen to allow for complete combustion of the fuel in use and is very dangerous because it is colorless, odorless, tasteless, nonirritating, and virtually impossible to detect without test equipment. Carbon monoxide is a cumulative poison that slowly builds up in the bloodstream; it combines with blood hemoglobin and replaces the oxygen in the bloodstream until there is too little oxygen to support life.

Maine views any ambient level of CO as potentially dangerous and will be considered a warning signal that a problem exists. According to ASHRAE standards, the maximum allowable concentration for short term exposure is 9 ppm in residential settings.

**\*Caution:** Test results may vary during different seasons of the year and different weather conditions. Low levels of CO measured in the exhaust stream of the combustion appliance, pre and post weatherization activities, does not guarantee that there will not be a problem under different conditions.

1. Client Education: Informational materials are distributed and verbal discussions take place on a case by case basis concerning combustion appliances. The Subgrantee informs the client about the importance of using exhaust ventilation when cooking and the importance of keeping burners clean to limit the production of CO.
2. Test Equipment:
  - CO Tester
  - Various Heating System Efficiency Test Kits
  - Digital Manometers
  - Pressure Pans
  - Smoke Gun
3. Testing Procedures: All houses with combustion appliances and/or fireplaces will be tested to the degree prescribed by DOE and Maine weatherization standards and results will be noted in *HEAT/Enterprise*. All testing procedures are listed in the Maine Weatherization Standards Manual.
  - a. CO in Flue: Houses with CO levels in the flue of combustion appliances (with the exception of wood and coal) higher than 50ppm will not be weatherized until system is evaluated by a licensed technician.
  - b. Ambient CO: Houses with ambient levels of CO higher than 9 ppm will not be weatherized until the source is mitigated. This could be the result of an unvented gas cook stove. Burners and ovens producing greater than 15 ppm should be cleaned or serviced. A CO alarm must be in place or installed near a gas range. Exhaust ventilation in the kitchen must always be recommended whenever a gas or propane cooking appliance exists, unless structurally impossible to install ventilation. Building tightness limits will be influenced by households of cigarette smokers.
  - c. Backdraft/Combustion Appliance Depressurization (CAZ) Test (Worst Case)
  - d. Draft Test
  - e. Efficiency Test
  - f. Pressure Balancing
4. Corrective Procedures: Corrective procedures may include any of the following:
  - a. Client Education
  - b. Deferral of Services
  - c. Refer heating system issues to the CHIP program
  - d. Repair heating appliances (DOE WAP funds may be used)
  - e. Correction of draft problems; proper venting to the outside if testing indicates a problem (DOE WAP funds may be used)
  - f. Combustion Air Evaluation and correction (DOE WAP funds may be used)
  - g. Pressure Balancing

Corrective procedures requiring special licensing will be referred to the appropriate authority.

5. CO Alarms: CO Alarms must be installed in homes with combustion appliances where no operable CO alarm is present. This is an allowable expense under DOE WAP.

6. **Other Funding Sources:** A majority of the heating system work to repair or replace "red tagged", inoperable, or malfunctioning heating systems will be referred to the Central Heating System Improvement Program (CHIP). Other funding sources should be utilized when possible.

DOE Health and Safety monies, keeping within the allowable averages, can be used as necessary to address repairs. If/when Maine's audit tool, ECOS, is approved by DOE for heating system replacements, Maine will allow for replacement using DOE WAP funds, unless prevented by other guidance. Maine's harsh climate, high heating degree day environment, justify the repair of inoperable or malfunctioning heating systems under DOE WAP.

### **Air Conditioning and Heating Systems**

DOE Health and Safety monies, keeping within the allowable averages, can be used as necessary to address heating system repairs. Maine will allow for heating system replacement using DOE WAP funds, unless prevented by other guidance. Maine's climatological conditions vary between 1.75 in Southern Maine to 2.25 in Northern Maine. This ranking demonstrates the severity of Maine's winters, as well as the actual number of heating degree days. Maine's harsh climate justifies the repair of inoperable or malfunctioning heating systems under DOE WAP.

Because of Maine's high heating degree day environment, cooling needs are considered to be insignificant for Maine dwellings. Therefore, Maine climate conditions do not warrant defining at-risk occupants or the repair or replacement of air conditioning systems under DOE WAP.

### **Formaldehyde and Volatile Organic Compounds (VOCs)**

DOE WAP funds may be used to remove pollutants if it presents a hazard for workers. If pollutants pose a risk to workers and removal cannot be performed or the client/owner does not allow its removal, deferral of services is required. Subgrantee must inform the client of observed condition, associated risks, and safety and proper disposal of household pollutants.

### **Existing Occupant Health Problems**

Subgrantees are advised that certain weatherization procedures may aggravate some existing health problems that client households may have. The Auditor will identify such conditions during the client interview and make special arrangements if necessary to accommodate the client's situation. The Subgrantee must provide the client information of any known risks and worker contact information.

### **Lead Paint**

Homes constructed prior to 1978 are presumed to contain lead paint. All clients residing in homes constructed prior to 1978 will receive the EPA pamphlet *Protect Your Family from Lead in Your Home* at least 10 days prior to the commencement of any weatherization activities. All weatherization workers, contractors and Subgrantees installing measures in pre-1978 homes must comply with the EPA's *Renovation, Repair and Painting Rule* (RRP) and must follow lead-safe weatherization practices. DOE WAP funds cannot be used for the abatement of lead paint.

In addition to requiring lead-safe work practices, MaineHousing has required all of its Subgrantees and their private contractors to purchase Pollution Occurrence Insurance (POI). MaineHousing will monitor all Subgrantees and private weatherization contractors to ensure they carry this insurance. Subgrantees retain documentation in their program files that all renovators and firms have current lead paint certification.

### **Radon**

Radon is a radioactive gas produced by the decay of radium. It occurs naturally in almost all soil and rock. Radon migrates through the soil and groundwater, and can enter the building through cracks or other openings in the foundation. Radon's decay products can cause lung cancer and is second only to smoking as a cause for lung cancer in America.

General weatherization procedures, such as reducing stack effect and relieving negative pressures in the combustion appliance zone (usually the basement), are beneficial for reducing the entry of radon gases. Negative pressures in the basement relative to outdoors will draw any gases, water, water vapor and cold air, into the basement. Program testing procedures and corrective measures outlined in the procedures manual describe corrective steps to take when faced with negative pressures in the combustion appliance zone.

Identification of radon levels through appropriate testing will be allowed with DOE health and safety monies in areas that the potential for radon is high. Radon concentrations vary greatly across Maine. Consequently, Subgrantees will be encouraged to develop procedures for their area that will allow for the identification of unsafe Radon levels.

Subgrantees provide clients with EPA *Consumer's Guide to Radon Reduction*.

### **Unvented Space Heaters**

Operation of unvented gas and liquid fueled space heaters can negatively impact indoor air quality through indoor air pollution. Indoor pollutant concentrations resulting from the use of unvented space heaters can vary significantly from house to house depending on the operation of the space heater and the infiltration/ventilation rates of the residential structure in which it is placed. Poorly adjusted heaters produce substantially greater quantities of carbon monoxide (CO), aldehydes and particulate than properly adjusted units. Inadequate ventilation may result in rapid buildup of all pollutants including harmful levels of CO.

In addition to the production of toxic by-products, unvented space heaters release water vapor equivalent to 8 to 11 gallons of water into the heated space for each million BTU of energy delivered. Water vapor condenses upon contacting cool surfaces, creating a source of mold growth and contributing to premature rotting of building materials. Mitigation methods include eliminating the source of water vapor, providing adequate ventilation, raising surface temperatures by proper insulation techniques and/or by circulating conditioned air.

MaineHousing's policy for unvented space heaters: In accordance with WPN 11-6, removal of unvented space heaters is required, except when used as secondary heat where the unit complies with ANSI Z21.11.2. Units that do not meet ANSI Z21.11.2 must be removed prior to weatherization but may remain until a replacement heating system is in place. Once the non-compliant unvented space heater is removed weatherization can commence. Cases where space heater usage is necessary (it's the only heat source or it compensates for inadequate distribution of heat by a central heating system) should be referred to the Central Heating Improvement Program (CHIP) for correction.

### **Building Structure**

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

Subgrantees will ensure that weatherization-related work will be in conformance with the applicable codes in the jurisdiction where the work is being performed.

1. **Knob and Tube Wiring (KTW)**: A Memorandum issued by DOE 10/21/1988 (which supersedes DOE guidance on KTW dating 7/25/1983 and 7/13/1988) states that work is to be in conformance with the applicable codes in the jurisdiction where the work is being performed.
2. **Circuit Overloading**: Auditors and crews should be on the lookout for circuit overloading and should notify the owner and note the problem in the client file. To the extent that these problems prevent adequate weatherization, the deferral of services form should be completed and repair should be considered by the Subgrantee on a case by case basis.

3. Miscellaneous Wiring Hazards: See *Hazards Chart*.

DOE WAP funds may be used for minor electrical repairs and adequate shielding of KTW.

**Ventilation**

ASHRAE 62.2-2013 is required to be met to the fullest possible extent. This application is not required where acceptable indoor air quality exists as defined by ASHRAE 62.2-2013. Existing fans and blower systems will be updated if not adequate.

**Diagnostic Equipment**

Diagnostic equipment, such as blower doors, will not be used on units where such equipment could exacerbate existing problems.

**Abatement Materials**

See *Hazards Chart*.

**Abatement Costs**

See Hazard Chart. Maine WAP health and safety guidelines are outlined in the *Maine Weatherization Standards Manual* (Section 4). These standards have been updated to incorporate guidance provided by DOE in Program Notice 11-6.

**Code Compliance**

Correction of pre-existing code compliance issues is not an allowable cost other than where weatherization measures are being conducted. State and local (or jurisdiction having authority) codes must be followed while installing weatherization measures. Condemned properties and properties where "red tagged" health and safety conditions exist cannot be corrected under this guidance and should be deferred

**Fire Hazards**

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

**Refrigerants**

Reclaim refrigerants per Clean Air Act 1990, Section 608, as amended by 40 CFR 82, 5/14/93

**Solid Fuel Heating**

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

**Spray Polyurethane**

Use EPA recommendations (available online at <http://www.epa.gov/saferchoice/spray-polyurethane-foam-spf-insulation-and-how-use-it-more-safely> ). Subgrantee must provide notification to the client on the use of various foams and take the recommended precautions. Subgrantees must also adhere to all state statutes and fire codes when installing two part spray polyurethane foam.

**Window and Door Replacement**

Windows and doors, respectively, may be replaced if justified by an SIR of 1 or greater.

**V.8 Program Management**

**V.8.1 Overview and Organization**

The MaineHousing, created in 1969, is Maine's housing finance agency. Its primary mission is to provide and help maintain affordable housing. Its mission statement reads: "The mission of the Maine

State Housing Authority is to assist Maine people to obtain and maintain decent, safe, affordable housing and services suitable to their unique housing needs." In carrying out this mission, MaineHousing will provide leadership, maximize resources, and promote partnerships to develop and implement sound housing policy.

Since its inception, the MaineHousing has provided housing for low and very low income renters and the opportunity for low and moderate income Maine families to purchase their own homes. In the more recent past, MaineHousing has expanded its programs to meet new challenges posed by various housing needs: people who are homeless; people with special housing needs (such as mental health consumers); the elderly; low income homeowners who cannot afford basic home repairs; and others.

The State of Maine developed the nation's first Weatherization Program in 1973 in response to the energy crisis that gripped the northeast and caused economic hardship across the country. Maine WAP became the model used in developing funding for a program in every state in the nation. The program was originally administered by the Division of Community Services, an executive department agency. It was re-assigned to the MaineHousing in 1991.

By its nature, MaineHousing rarely serves its customers directly. It places a heavy reliance on its partners to deliver its programs and services to the low income and working households that it serves. These partners include real estate professionals and lenders, non-profit organizations, other government agencies (in particular, DECD & Human Services,) municipalities, for-profit corporations, private developers, private landlords, management corporations, and Community Action Agencies (CAAs). With offices located throughout Maine, 9 of Maine's CAAs serve as Subgrantees for the DOE Weatherization and Low Income Home Energy Assistance Programs (LIHEAP).

In addition to WAP, MaineHousing serves as Grantee for LIHEAP, CHIP and other home repair programs. Weatherization serves as MaineHousing's cornerstone to providing thousands of Maine homeowners and renters with funds to repair and improve their homes. CDBG, Fed Home and other state and federal sources of funds will be used in conjunction with WAP funds to address this home repair crisis. In addition, MaineHousing consistently designates 15% of its LIHEAP grant to weatherization and heating system repair programs.

#### **Review of Subgrantee Work Plans, Budgets, and Reported Results**

Before the beginning of the DOE 2017 funding year, MaineHousing will review the detailed Work Plan on file for each Subgrantee and request any updates, if necessary, and will request a detailed Budget for the new program year. No funds will be advanced to Subgrantees until such Work Plans and Budgets are reviewed and approved by EHS staff.

EHS will perform comparisons of Subgrantees monthly billings versus their approved budgets to identify financial or compliance variances. EHS staff will work with Subgrantees to correct/understand variances as they are identified during this process.

#### **Allocation of Funding to Subgrantees**

MaineHousing will allocate program funding to Subgrantees based on the percentage of LIHEAP applications approved. MaineHousing reserves the right to re-allocate funding among Subgrantees during the program year based on program performance and need statewide.

MaineHousing has been advised by DOE that due to the short-term Continuing Resolution passed by Congress to keep the Federal government operational through April 28, 2017, funding for the 2017 WAP Program will be at the 2016 level as defined in WPN 16-2A. Of this allocation, only 60% of the allocation will be available for April 1 Grantees until either a Federal budget is passed or the Continuing Resolution is extended. MaineHousing will issue contracts to its Subgrantees using the formula described above. When additional funding becomes available, contract amendments will be issued

reflecting the new funding. Also, the maximum funding allocations for PY 2017 will be only to the level described in WPH 16-2A. No unspent funds may be carried over from PY 2016.

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

Allocation of the funds for the current Program Year show all Subgrantees at 5% administration. (See Annual File - Part A) Once all Subgrantee budgets are reviewed and approved, the Grantee will file an amendment to this State Plan, reflecting actual budgeted administrative costs.

The Maine WAP may allow up to an additional five percent (5%) administrative funding for Subgrantees which qualify based on the following criteria:

1. As required by federal regulations, the Subgrantees must receive less than \$350,000 for their total annual sub-granted amount.
2. Subgrantee budgets must reflect reasonably expected administrative costs for the new grant period which are in excess of the 5%. These expected costs should be based on the best information currently available.
3. The Subgrantees must have no uncorrected audit or monitoring findings regarding the allocation of costs to the DOE sub-grant for the most current period available.

Any Subgrantee meeting criteria defined in 10 CFR 440.18(d) may receive increased administrative funding, not to exceed 10%, based on actual costs incurred. The Grantee will require the Subgrantees to submit a letter of application for additional administrative funding. This letter must address the impact on production and the need for the additional administrative funds as well as the three criteria shown above.

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

#### **Programmatic/Subgrantee Monitoring**

The monitoring approach under the Maine WAP will be to work closely with Subgrantee personnel to ensure continued quality workmanship and to ensure adequate financial systems and procedures. Maine WAP will administer Quality Control Inspections (QCI) in accordance with the standard work specifications outlined in the *Maine Weatherization Field Guide* and 10 CFR 440 using both the independent QCI and the independent auditor/QCI options. This will enable the smaller Subgrantees to utilize a process which allows for smaller existing staffs. In all cases QCIs will be Subgrantee employees and the Grantee will perform quality assurance reviews of at least 10% of all completed units. Comprehensive coverage of all Subgrantee WAP activities is achieved by a combination of regularly scheduled Grantee efforts:

1. Administrative and fiscal monitoring – *annually*
2. Onsite inspection of completed units – *monthly*
3. Client file review – *monthly*
4. Review of Subgrantee workplans, budgets, and reported results - *ongoing*
5. Review of independent Subgrantee annual audits – *annually*

MaineHousing has developed its own monitoring tool that includes reviews of the Subgrantee Uniform Grant Guidance Audit prescribed by 2 CFR 200. Among other things, MaineHousing has determined that the DOE monitoring tool duplicates many financial and compliance audit requirements under 2 CFR 200 which all Subgrantees must have their independent auditors perform annually. MaineHousing routinely reviews Subgrantees' annual independent audits.

### **Financial Monitoring**

MaineHousing's Department of Energy and Housing Services Department (EHS) will perform comprehensive administrative and fiscal monitoring of each WAP Subgrantee on an annual basis using the Compliance Review Administrative Monitoring Tool. During the annual administrative and fiscal audit, MaineHousing conducts a 10% file review of Subgrantee's production. If a significant issue is cited MaineHousing will expand the sample size.

The EHS Fiscal Compliance Specialist addresses the following areas of performance under DOE Weatherization:

- Annual Financial Monitoring review
  - Financial/Fiscal Accountability
  - Uniform Grant Guidance Audit prescribed by 2 CFR 200
  - General ledger
  - Payroll/Personnel/Timecards
  - Vehicles and equipment purchases
  - Procurement Indirect rate
  - Invoicing
  - Record retention
  - Corrective action plans
  - Contractor payments
- Annual Production File Review
  - Procurement process
  - Energy audits
  - Eligibility
  - Proof of ownership
  - In progress and final inspections
  - Contractor invoices
  - Release of liens
  - Scope of work

Each comprehensive monitoring visit will include an exit interview during which the EHS Grant Management Compliance Specialist shall apprise Subgrantee personnel of pertinent findings and recommended improvements, as applicable. Within 30 days of administrative/fiscal monitoring visit, EHS will prepare a report to the Subgrantee summarizing these findings and requesting corrective actions. Additionally, the Fiscal Compliance Specialist will perform a six (6) month follow-up review of corrective action plans, if applicable.

If significant issues are identified, MaineHousing requires the Subgrantee to submit a corrective action plan for MaineHousing's review/approval. MaineHousing will conduct a six (6) month follow-up review to ensure the plan was executed and effective in addressing the issues.

### **Independent QCI Monitoring**

EHS Technical Service Specialists will perform onsite inspections of completed and in-progress units statewide on a monthly basis. They will inspect a minimum of 10% of each Subgrantee's completed weatherized units (with DOE funds) in the program year. If significant issues are identified, the Technical Services Specialists will expand the percentage of inspected units. Criteria for unit inspections will be:

- Maine Audit System
- Maine Weatherization Standards Manual
- Maine Weatherization Field Guide
- Program Guidance
- Department of Energy Regulations

Within 30 days of the site inspection, the Grantee monitor submits a Unit Inspection Report to the Subgrantee. These reports include findings and any required corrective actions, communications with the client/owner and contractor, observations and an assessment of the auditor's performance. If a rework is ordered, the Subgrantee will have thirty (30) days to complete the rework and notify EHS, in writing, of its completion. The Subgrantee may also contact the Director of EHS in writing during this thirty (30) day period to appeal a rework finding. The unit will be revisited by the Director of EHS, a representative of the Maine Community Action Agency Housing Council, the Grantee monitor, and a Subgrantee representative to resolve the dispute through actual onsite observations and discussion of discrepancies.

If the rework ordered is not rescinded following this appeal process, the Subgrantee will have thirty (30) days from the date of the appeal resolution to complete the rework.

If reworks are not completed within thirty (30) days, and the Subgrantee has not demonstrated reasonable cause for delay, a billing adjustment will be made for the entire dwelling unit. The unit will not be reinstated until the rework has been completed.

If there are significant deficiencies identified, such as health and safety violations, poor quality installation of materials, major measures missed, then the Grantee will require the Subgrantee to take appropriate corrective action to resolve the outstanding issues within thirty (30) days. The Grantee monitor will increase the number of units reviewed and frequency of monitoring visits to the Subgrantee until there are assurances that all deficiencies have been resolved.

Subgrantees are required to submit corrective action plans when there are indications that the Subgrantee has significant compliance issues.

In addition to the onsite (technical monitoring), the Technical Service Specialists will conduct a 100% desk/file review of the completed units submitted by each Subgrantee. This practice allows the Grantee to closely monitor best practices, identify concerns, and select/prioritize units for onsite inspections.

### **Independent Subgrantee Audit**

Each Subgrantee will have an audit of their financial statements and a Uniform Grant Guidance Audit prescribed by 2 CFR 200 compliance audit conducted by an independent CPA firm following the close of the Subgrantee fiscal year. These audits will comply with all regulations pertaining to DOE WAP and will be made available to Grantee management. MaineHousing's Fiscal Compliance Specialist evaluates/reviews the results of these audits on an annual basis.

Subgrantee must provide written assurance that corrective action has been taken or present a plan to correct any noted deficiencies within sixty (60) days. During and following this sixty-day corrective action period, Grantee staff will offer and be available for training and technical assistance as needed by the Subgrantee.

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

The goal of Maine's WAP is to enhance the efficient operation of this program and to ensure the effectiveness and quality of the work performed. The desired result of these efforts is to conserve more energy and to accomplish greater savings in heating costs for the low income residents of Maine.

The role of training and technical assistance is to provide specific activities to enhance the skills of personnel at the Grantee and Subgrantee level. The desired result of all T&TA activities will be to maximize energy savings, ensure health and safety of clients and WAP personnel, minimize operating costs, improve management and administrative procedures, and prevent waste, fraud and abuse.

The training plan of Maine WAP incorporates results of EHS field monitoring visits, and WPNs. All Tier I training in PY 2016 will be conducted by IREQ accredited training organizations. Tier II training will be administered by QCI or qualified personnel on an as needed basis. In addition, Grantee and Subgrantee staff will attend Tier II training.

##### **Grantee/Subgrantee Training**

All training sessions will be mandatory for applicable Grantee and WAP staff. The following components are to be included:

1. BPI Quality Control Inspector training and certification for Grantee and Subgrantees. There are 2 QCI monitors at the state level and at least one QCI at each Subgrantee. Future QCI training and testing for at least 9 candidates will be funded with T&TA funds at the cost of \$31,500 (estimated \$3,500 per candidate).
2. Training through attendance at an annual WIPFLI Financial "Supercircular" Training held in 2017. This training is important for Grantee and Subgrantees to better understand the numerous changes to financial regulations in Federal programs. MaineHousing anticipates a cost of \$10,000.
3. Health and safety training through attendance at the 2017 Northeast Indoor Air Quality and Energy Conference held in Maine. This training will be provided to Grantee and Subgrantee technical staff aimed at improving the indoor air quality and environment of the home to be weatherized and will be consistent with WPN 11.6 and the standard work specifications as adopted in *Maine's Weatherization Field Guide*. MaineHousing anticipates a cost of \$10,000.
4. Tier 1 training and testing to include combustion appliance safety, moisture control, building tightness assessments, and ASHRAE 62.2 compliance. An IREQ accredited trainer will be used to conduct this Tier I training. Expected participation will include 28 Grantee and Subgrantee staff. The estimated cost to initiate this training is \$30,000 (based on past training events and discussions with industry professionals).
5. Contractor and crew training on the new Quality Work Standards and Maine Weatherization Field Guide for approximately 25 contractors and crews utilized by the Subgrantees for field work in the Maine WAP. The estimated cost to initiate this training is \$25,000 (based on past training events and discussions with industry professionals).
6. The Grantee will fund attendance for Subgrantee and Grantee personnel at Department of Energy approved training conferences as applicable to various technical and fiscal personnel. This is

intended to ensure that all Subgrantees obtain information and benefits provided by regional conferences for continued compliance with DOE rules and regulations. MaineHousing anticipates a cost of \$16,000.

7. Grantee staff will also provide training on-site as needed in technical and fiscal matters. MaineHousing anticipates a cost of \$10,000.

All Subgrantees will be required to submit a T&TA Work Plan with their budget for Grantee approval. These Work Plans will identify and address T&TA needs at their agency. A standard outline will be provided to all Subgrantees setting forth the areas required in their Work Plans. The Grantee will review the Work Plans and budgets to determine whether the Subgrantees are complying with the outline as well as the standards stated above. The Grantee will also coordinate and provide all Subgrantees with the current developments in technical procedures and DOE guidance on technical issues. Through these procedures, the Grantee will ensure consistency in the Subgrantees' procedures as well as identifying needs of individual Subgrantees. The Grantee will expend every effort, through monitoring and management activities, to ensure that Maine continues to operate a quality WAP.

The Housing Director of each Subgrantee will notify the Grantee and the Housing Council of any and all planned training sessions so that common needs are coordinated and duplication is avoided.

The Grantee will continue to conduct surveys of all Subgrantees and solicit input from Grantee staff to identify training needs. This information is utilized to determine which topics the Grantee and Subgrantees will schedule for trainings during this and future grant periods. The results of the survey will be shared with the Housing Council to assist with their employee and subcontractor trainings and meetings.

Maine also relies heavily on information gathered during the monitoring process to determine productivity and energy savings. Monitoring reports are carefully analyzed to prioritize training needs. There will continue to be training such as EPA Certified Lead Renovator training which requires EPA certified trainers and other specialized training as it becomes available (i.e. Maine Indoor Air Quality, Affordable Comfort, etc). MaineHousing is notified of these external training opportunities and informs Subgrantees/contractors of them.

MaineHousing tracks Grantee and Subgrantee credentials to ensure maintenance of these credentials.

The effectiveness of T&TA activities is gauged by:

- review of session evaluation forms,
- feedback from Building Technical Committee and contractor meetings,
- comparison of pre & post training on-site results; and
- analysis of responses to annual Subgrantee training needs surveys.

### **Client Education**

Per the *Maine Weatherization Standards Manual*, energy auditors and inspectors are required to provide the client/owner education during all phases of the weatherization process. This includes, but is not limited to:

- how the weatherization process will address health and safety issues,
- explanation of energy-conserving measures that will be installed,
- recommendations on how the client can conserve energy, and

- explanation of required maintenance for existing equipment, added equipment, or energy-saving measures.

## V.9 Energy Crisis and Disaster Plan

On March 5, 2012, MaineHousing received Weatherization Program Notice 12-07 (WPN12-07) from the Department of Energy. The purpose of the DOE notice was to provide guidance on allowable activities using DOE WAP resources in the event of disasters. Allowable expenditures under WAP include: 1) the cost of incidental repairs to an eligible dwelling unit if such repairs are necessary to make the installation of weatherization materials effective; and 2) the cost of eliminating health and safety hazards, elimination of which is necessary before the installation of weatherization materials. The extent that the services are in support of eligible weatherization (or permissible re-weatherization) work. In accordance with WPN12-07, MaineHousing may allow Subgrantees to use WAP funds to address disaster related hazards within the following parameters:

1. All repairs or replacements must fall under the definition of *Energy Related Repairs or Permissible Health and Safety Activities*.
2. Funds shall only be used for "no heat" or heating emergency repairs or replacements. The per unit budget for heating repair or replacement is \$4,000.
3. Properties serviced under this relief plan must have a complete weatherization audit done prior to receiving benefit, and an *HEAT/Enterprise* audit and estimate must be submitted with the billing.
4. The weatherization portion of the benefit must be completed by the end of program year. If the Subgrantee lacks enough DOE funding then it must commit funds from another source (e.g. LIHEAP) to complete weatherization.
5. Households receiving emergency repairs or replacements will not be counted as completed units under the DOE program until such units have received weatherization services, except if the audit determines that no weatherization work is necessary, then it may be counted as a completed, weatherized unit.
6. Any Subgrantee wishing to participate in the Energy Crisis Plan must provide MaineHousing with a written plan to include a budget revision quantifying the expected benefits and costs including Subgrantee support costs and the number of estimated "no-heats" to be served.

Priority for weatherization services will be identified through the use of MaineHousing's LIHEAP eligible households list, which includes a WAP ranking based on their annual energy consumption for heat, income and household demographics. The rank uses an algorithm to allocate points that will allow higher priority to be assigned to households with the highest energy burden, lowest income and contains at least one individual who is elderly, disabled, hypothermia risk or is twenty-four (24) months or younger. This WAP Rank becomes the basis for determining production targets and wait lists. Subgrantees have the option to further prioritize services to high energy use/energy burden consumers by submitting agency specific plans during the work plan and budget approval process.