

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

**(Grant Number: EE0007926, State: MA, Program Year: 2017)**

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

Consistent with DOE's income eligibility regulation that allows:

*3) If a State 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 of the poverty level determined in accordance with criteria established by the Director of the Office of Management and Budget*

DHCD uses household eligibility for LIHEAP as the determination of eligibility for DOE WAP services. Currently, LIHEAP eligibility in Massachusetts is based on 60% of the Estimated State Median Income which is greater than 200% of the Federal Poverty Level.

Describe what household Eligibility basis will be used in the Program

DHCD uses a "Single Certification Process" in conjunction with the Low-Income Home Energy Assistance Program, (LIHEAP), also administered by DHCD. Effective in FY 2009, LIHEAP allows clients who are certified as eligible for LIHEAP, up to 60% of the Estimated State Median Income to receive weatherization assistance from the DOE WAP. The single certification process simplifies the application process for clients, enables Subgrantees to share staff and resources in the certification process as well as providing the client with a more comprehensive energy package. The process also provides consistency of eligibility for LIHEAP, HEARTWAP (DHCD's LIHEAP funded heating system repair and replacement program), and a variety of utility-funded energy efficiency programs, in addition to the DOE WAP. Those households that may not be eligible for LIHEAP, but are categorically eligible for the DOE WAP by virtue of receiving cash assistance payments under Title IV or XVI of the Social Security Act, are eligible for weatherization services as per DOE regulations. Additionally, households that are not interested in LIHEAP services may apply for weatherization through the LIHEAP operating agency (in most cases the same as the WAP) and income eligibility determination is based on the LIHEAP certification requirements or the categorical DOE eligibility outlined above.

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

DHCD uses the LIHEAP application certification process to determine eligibility for LIHEAP and DOE WAP services. The Single Certification Process application process in Massachusetts for LIHEAP and WAP requires documentation from applicant households proving their U.S. Citizenship or Qualified Alien status. Qualified Aliens include individuals who are lawfully in the U.S. and aliens who are lawfully admitted for permanent residence, asylees, refugees, aliens paroled into the U.S. for at least 1 year, aliens whose deportation is being withheld, aliens granted conditional entry, Cuban/Haitian entrants and certain battered aliens and their children. Non-Qualified Aliens are not eligible for benefits. All LIHEAP eligible households are referred to WAP and clients are selected from LIHEAP priority ranked eligibility list. Qualified aliens are eligible for WAP and will be served consistent with their priority status.

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

Procedures to determine that units weatherized have eligibility documentation

LIHEAP Subgrantees are required to document all household income as part of a client's Fuel Assistance application to determine household's eligibility. According to guidelines outlined in the Massachusetts LIHEAP Administrative Guidance the documentation may include: pay stubs, public assistance benefits assistance checks, unemployment payments, verification of rental income or pension checks. Verification of the household's income information from all sources is recorded on the application and remains in the client's LIHEAP file.

The process is consistent with DOE Regulations, which allows states to use LIHEAP eligibility criterion as the basis of eligibility under WAP, provided that the LIHEAP basis is at least 200% of the poverty level and that the same basis is used throughout the State. Clients who are home owners are required to show proof of homeownership and clients who are tenants must have signed permission from the building owner/landlord consistent with DHCD's rental guidance before work can proceed.

The software package used by the LIHEAP Subgrantees to manage the program and client eligibility in Massachusetts is fully integrated with the WAP software implemented during the DOE WAP FY 2017. Eligibility determination documentation is included in the DOE WAP file.

Describe Reweatherization compliance

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Consistent with DOE WAP regulations, DHCD allows Subgrantees to provide additional eligible cost-effective efficiency measures to homes that had received DOE WAP services prior to September 30, 1994. Subgrantees are not encouraged to revisit previously weatherized units. Subgrantees are required to maintain historical records of previously weatherized addresses in a manner that permits an easy search to identify the address' weatherization status. Subgrantees typically use some variation of a spreadsheet or database to identify the funding source, expenditures and measures completed. The system is searched by Subgrantee staff to determine the status of the address before any outreach activities are conducted. During the annual WAP Program Assessments, DHCD reviews the re-weatherization identification system and tracks several completed units to determine that their status was properly identified.

Describe what structures are eligible for weatherization

Eligible structures include: single family homes (rental and owner occupied), small multi-families (1-4 units), condominiums, multi-family buildings (5+ units), manufactured housing, and as well as group homes, single room occupancy rooming houses (SRO), and shelters.

Large multi-family buildings, group homes, shelters and SRO's must be submitted to DHCD for prior approval. If large multi-family buildings are submitted to DHCD to receive DOE WAP Services, DHCD will contact the DOE Project Officer for approval prior to authorization.

Describe how Rental Units/Multifamily Buildings will be addressed

DHCD's policy regarding rental units/multi-family buildings and tenant protection policies is outlined in DHCD's WAP IM-2009-008 Rental Guidance. The Rental Guidance protects against rent increases and protects against evictions for a minimum of one year due to the weatherization work that was completed, and ensures that no undue property enhancements occur as a result of the weatherization process. DHCD has streamlined the Rental Guidance to incorporate the majority of weatherization situations into a single Tenant/Property Owner/Agency Agreement. In those instances where rehabilitation is part of the weatherization process, more stringent agreements are available through Special Projects provisions. DHCD requires that upon sale of the building, that the new owner, either continue the agreement, or to repay the agency for the cost of weatherization materials and labor. The agreement provides that the tenant is the intended beneficiary of the weatherization and specifically has a right of enforcement. This specific empowerment gives the tenant clear and unequivocal standing in court.

When the DOE Multi-family Guidance is formalized and adopted, Massachusetts will revise any policies and procedures inconsistent with DOE requirements.

From the Massachusetts WAP Policies and Procedures Manual:

**Chapter 5: DOE WAP and HEARTWAP Rental Guidance**

**Section 5.1**

**RENTAL GUIDANCE OVERVIEW:**

- **Legislation and Regulation:** The authorizing legislation for DOE Weatherization is the Energy Conservation and Production Act (ECPA) of 1976, as amended, (42 USC 6864 et. seq.). The Act allows weatherization not only in owner-occupied homes, but in low-income rental dwellings as well. Under the Act and DOE regulations governing the program (10 CFR 440.22):

- The Subgrantee must secure the property owner's written permission for the weatherization work;
- Rents must not be raised because of the increased value of a dwelling unit due solely to the weatherization;
- The value of owner's property must not be unduly or excessively enhanced.

The intent is that the benefit of the weatherization work adheres to the low-income tenant. DOE regulations also provide specific standards for determining eligibility of multi-family rental housing for the program. This information is included in the WAP Technical Manual and memoranda.

- **DHCD's Interpretation of the Legislation and Regulations:** From the beginning of the operation of the WAP, DHCD's policy has been that tenant protection is of primary concern. It was determined that tenants should receive the benefit of the program in two ways:

Tenants should receive a tangible benefit from weatherization including an increase in comfort in their homes as

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well as lower heating bills.

Low-income tenants should be reasonably assured that they will continue to enjoy the benefits of the program for a period of time after receiving the weatherization services.

**Property Owner Contributions:** DHCD encourages but does not require an in-kind contribution from the property owner especially in those circumstances when multiple units are receiving weatherization services and the resultant value of those services is high. It is particularly appropriate for a Subgrantee to require owner contributions to repair sanitary or building code violations as a pre-condition for receiving weatherization.

**Longer Term Agreements/ Rent Limitations:** An additional approach to assuring that tenants receive the benefits of weatherization is to increase the period of the agreement and/or further regulate rent increases over the agreement period. This is particularly appropriate if the weatherization benefits proposed for the building are of a high monetary value.

## **Section 5.2**

### **RENTAL WEATHERIZATION PROGRAM REQUIREMENTS:**

- **Standard Rental Program Requirements:** Rent in weatherized units shall not be raised for one year following the signature of the agreement, except as noted in this guidance. Owners whose property is weatherized shall agree that if the property is sold within one year, then either:

The obligations of the tenant/landlord agreement shall be transferred with the sale of the property; or  
The total amount of the weatherization materials and labor shall be refunded to the Subgrantee.

See the Appendix for the Standard Tenant/Property Owner Agreement in place for WAP.

**Allowable Exceptions, Omissions, and Alterations:** Under some circumstances, the basic weatherization program requirements may be modified because other programs' requirements, laws, or regulations supersede weatherization requirements, or because modifications of the weatherization requirements are the only means through which the program can be operated, because of particular local conditions. Particular local problems should always be brought to DHCD's attention as soon as possible.

Subgrantees are empowered to design local requirements that go beyond the basic requirements presented here. Such local additions must always be presented to DHCD prior to implementation.

**Limited WAP:** Where the weatherization of a single unit takes place in an owner-occupied building and where the weatherization is limited to the eligible unit and the total expenditure for the unit in materials and labor will not exceed \$400, the Subgrantee may delete Paragraph 8 requirements for repayment or transfer upon sale of the building, in the Standard Agreement.

**Rent Subsidy Programs:** Requirements under various state and federally subsidized rent programs in privately-owned housing supersede the rent provisions of the WAP Tenant/ Property Owner Agreement. These programs may provide stronger protections against eviction and rent increases than the weatherization program. Consequently, DHCD recognizes that those stronger protections supersede the weatherization agreement where appropriate.

**Taxes, Revaluations, Water/Sewer Rates, and Other Charges:** There are some increases in operating costs to landlords that are not under their control, and which may be substantial. DHCD's basic position is that for the minimum one year period, most such charges will not be sufficient to warrant relaxing the no-rent increase policy. However, extenuating circumstances will be addressed on a case-by-case basis. Property owners will be required to justify those requests by documenting significant increases in property taxes, water/sewer rates, or other unusual increases in the operating costs of the property.

## **Section 5.3**

### **THE TENANT/ LANDLORD (PROPERTY OWNER)/ AGENCY AGREEMENT (T/L AGREEMENT)**

Since tenants are not the legal owners of their residences, work may not begin until it is legally consented to in writing by either the property owner or landlord (if the landlord legally represents the owner in this circumstance.)

To accomplish this legal consent, a three-party Tenant/Landlord/Agency Agreement (T/L Agreement) was developed to allow weatherization agency staff, HEARTWAP staff, and contractors to enter the client's premises in order to perform efficiency work. Subgrantees must use the Agreement in its final form, as attached to this guidance. Subgrantees, however, may add to the required provisions to address local conditions. Additions to agreements must be submitted to DHCD for approval prior to their

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use. A signed and dated Tenant/Landlord/Agency agreement needs to be kept in the client's file.

- **Standard Weatherization Agreement:** The basic Tenant/Landlord (Property Owner) weatherization agreement is intended to be the most frequently used weatherization agreement. Subgrantees must use the agreement in its final form, as included at the Appendix at the end of this Manual. Subgrantees, however, may add to the required provisions to address local conditions. Revised agreements must be submitted to DHCD for approval prior to their use.
- **HEARTWAP Standard Agreement:** The Standard HEARTWAP agreement is identical to the basic WAP agreement. Appropriate references are made to HEARTWAP in place of WAP, including:

The Massachusetts Oil Burning code is referenced in place of the Weatherization Priority list.

The maximum amount for tenant heating system replacement is noted as \$1000 while asbestos abatement is \$950 maximum or 50%, whichever is less (unless the property owner is LIHEAP eligible).

#### **Section 5.4**

##### **SIGNIFICANT ELEMENTS OF THE STANDARD WAP AND HEARTWAP T/L AGREEMENTS:**

- **Parties to the Agreement:** Parties to the Agreement include the tenant, the property owner, and the Subgrantee. Note that the owner's agent may sign the agreement if the agent can demonstrate written authorization to conclude rental agreements.
- **Period of Agreement:** The agreement period begins upon signature by the Agency, which will be the last party to sign.
- **Location of the Dwelling and Permission for WAP Work:** The building address must include the unit number within the building, if applicable.

Section a) provides permission to inspect the unit.

Section b) provides permission to perform the weatherization work, following the weatherization measures priority list for the particular type of dwelling from Attachment A, the DHCD WAP priority measures list.

Section b) also provides a mandatory sign-off for the owner. The owner may allow the Agency to proceed with the weatherization work without further approval,

**--or--**

- The owner will agree to the work separately after seeing the Agency's write-up of the work. This does not mean that the owner can require measures out of their order of priority, or require measures that are not allowed by the WAP. The intention of this sign-off is that the owner be informed of the work to be done before the fact, to avoid any misunderstanding about what measures have been agreed to.
- The owner must initial one of the options, either to proceed with the work without further approval or to sign-off on the work list prior to the work beginning. With both options the Agency must provide a list of the measures and costs to the owner at the completion of the work.
- **Maximum Amount of Materials and Labor: Completion of WAP Work by Agency:** This section allows the Subgrantee to enter the estimated value of the work to be completed and that the Agency has discretion to determine the exact amount of work that will be done. This section also states the expected completion date of the work to be done by the Agency.

Note that asbestos removal is mentioned. DHCD does not ordinarily pay for asbestos abatement under WAP. The possibility is provided for an extreme circumstance.

- **Owner Repairs:** In some cases, the owner will agree to do repair work as a pre-condition to the Agency starting weatherization work. The owner takes on the obligation to complete the repairs before the Agency starts weatherization. If the owner does not finish the work by the date agreed, then a written extension must be granted. If the owner does not meet the conditions of this section, then the Agency is not obligated to commence the weatherization.
- **Agreement to Allow Fuel Bills to be Examined:** Requires no additional signatures by the owner, but should be pointed out, especially if heat is included in the rent.
- **No Rent Increases Due to Weatherization:** This is a restating of the DOE law and regulations. There is no time limit on this provision.
- **Consideration of Weatherization Work:** The first paragraph makes the agreement effective from the date of signature and then sets the one year minimum period from the date of completion.

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The statutory language states that the primary benefit should accrue to the tenants, but does not state any time limit on that benefit. Massachusetts and many other states adopted a basic one year period because real world experience suggests one year is a practical limit that owners will accept. The law, however, does not recognize a time limitation. The increased time period in this revision of the Standard Agreement is in recognition of the need for tenants to have at least one full year of the weatherization benefits, rather than only nine or ten months following completion, which is often the case now.

- **Rent May Not be Increased for One Year:** This period may be increased at the Subgrantee's discretion. The present rent must be stated, including the payment period (weekly, monthly, etc.). The agreement is worthless without completion of this section.

The waiver provision applies only to housing rented under state or federal rental programs in which tenant rents are directly subsidized and a state or federal regulatory process determines the rent tenants will pay.

- **No Eviction During the Agreement Period:** No eviction during the agreement period except for good cause related to the tenant (or successor tenant). This generally means that the tenant may not be evicted in the absence of serious or repeated violations of the terms of the lease or tenancy.
- **Sale of the Premises:** This provision is intended to provide some measure of protection for low-income tenants when the building is sold.

Under Option 1, the Property Owner agrees not to sell the property unless the buyer agrees to assume all obligations of the Agreement.

Under Option 2, the Property Owner agrees to repay the amount of materials and labor installed in the unit, as of the date of sale. This repayment goes to the agency, not to the tenant.

- **Heat Included in the Rent:** This provision is applicable only if the heat cost is included in the tenants' rent. The provision includes the minimum one year of no rent increase and provides a percentage increase for a negotiated period of years. DHCD suggests that the period of the extended agreement be based upon the amount of work and the number of units weatherized in the building as well as the expected savings to be generated for the owner. DHCD will allow and support percentage increases where appropriate, and will be available for consultation on this issue.

If heat is included in the rent as part of a rent subsidy program, this section does not apply.

- **Other Rental Agreements:** This Agreement is incorporated into any other existing lease or agreement and if there are differences, this agreement supersedes other agreements unless the other rental agreement contains stronger protections for the tenant, in which case those protections apply.
- **Breach and Damages:** This section provides for the Subgrantee's right to recover the weatherization investment when the Owner has breached the agreement, including attorney's fees and court costs. The tenants' right to seek damages from the owner is also addressed, and the owner agrees to pay the tenants' attorney fees and court costs.
- **Last Items:** There are three (3) important concepts here:

Placing the agreement under seal relates to the parties' intention that this be a binding contract.

The tenant or a successor tenant is the intended beneficiary. Should the tenant move out during the agreement period, the owner is still bound to abide by the agreement provisions for the next tenant.

The tenant or any successor shall have a right of enforcement, meaning the right to go to court and seek to enforce the agreement, or seek damages from the owner for breach of the agreement.

**Signatures:** Signatures are vital. The Subgrantee must always be sure a copy of the agreement with all signatures is in the hands of all parties and particularly in the client file. Dates are as important as signatures.

**Sale of Premises Provisions:** DHCD requires a strong presentation to property owners and tenants about the rights and responsibilities of each party. Draft model letters can be found in this document's Appendix (A-4) and these include the minimum information that must be given to landlords and tenants. Each Subgrantee may employ these models, or alternative written material that provides, at a minimum, the information provided in the model.

**Attachment to the T/L Agreement:** The Weatherization Priority List. See the Appendix of this manual or the MA WAP Technical Manual.

## Section 5.5

### **ADDITIONAL PROVISIONS AND AGREEMENTS IN THE T/L AGREEMENT:**

- **Term of Tenant Protection:** The Term of the Owners' Agreement, under Paragraph 8 of the Standard Agreement and

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parallel provisions of other agreements, may be increased beyond one year. This may be the result of doing work in a large multi-family dwelling in which a major investment of weatherization funds is being made and the agency believes that protection for tenants beyond the first year of the agreement is necessary. DHCD does not require approval of an increase in term, but we would like to be informed by Subgrantees.

- **Repairs:** The Subgrantee must specify the owner's contribution to weatherization in materials, labor, or funds. Where this contribution is being made to correct code violations, the agreement must specify that all WAP work is dependent upon prior completion of the owner's agreed upon work. In this instance, and where other landlord work must be completed in order for weatherization work to be done, the agreement should specify the dates for landlord completion of agreed upon tasks and that time is of the essence for completion.

## Section 5.6

### **PROCEDURES FOR IMPLEMENTING THE STANDARD T/L AGREEMENT:**

- **Clients Living in Private, Non-Subsidized Housing:** Upon receipt or approval of an eligible tenant's weatherization application, the Subgrantee must contact the owner of the building to advise him or her of the tenants' eligibility for weatherization and the benefits and responsibilities on the part of the owner. Most Subgrantees employ a brief written description, such as those found in Attachments 3A, 3B, and 3C.

The Subgrantee should never delegate the initial landlord contact to a third party, such as to an Auditor/Inspector or contractor working on a contractual basis.

The owner must sign the agreement prior to the WAP inspection, so that the Inspector is legally entitled to enter the premises. The tenant must also provide written permission to the Subgrantee to enter, inspect, and do the work at the point of application.

If the owner wishes to have an agent sign the agreement, the agent must provide a witnessed power of attorney signed by the owner, stating that the agent has the power to enter into contractual arrangements for the owner.

If the owner is making a contribution to the weatherization work, or is making necessary repairs as part of the weatherization agreement, particularly to repair building and sanitary code violations, the contribution and the work to be performed must be clearly stated in the Tenant/ Property Owner Agreement.

The owner may provide permission to proceed before the audit is complete, or may require a review of the audit prior to a second sign-off. Following the inspection, but before the job is started, the Subgrantee must provide the owner with a detailed estimate of the weatherization work to be done, and the overall cost if the owner requests that.

- **Subsidized Housing Programs:** Requirements for privately-owned rental dwellings subsidized by one of the various federal or state housing programs are identical to other rental weatherization requirements, except that the provisions on rental increases in these programs govern, rather than the standard weatherization agreement rent provisions. **Publicly-owned subsidized housing, single family, multifamily, or developments must receive prior approval from DHCD.**

Though DHCD does not prohibit Subgrantees from weatherizing units in which heat and utilities are included in the rent, there is recognition that the primary benefits from weatherization services must accrue to the low-income tenant. In practice, the majority of rental units served in Massachusetts are small multifamily (2-6 units), and the tenants pay their own heating costs as well as are the direct beneficiaries of the weatherization services. According to data provided on the Building Weatherization Reports submitted from WAP Subgrantees, from the FY 2005-2015 DOE WAP, tenants paid the heating costs in over 85% of the rental units weatherized. While DHCD encourages Subgrantees to solicit in-kind contributions from landlords in multi-family buildings, contributions are not a requirement for the tenants of the building to receive weatherization services. DHCD has also developed procedures for eligible occupants of Group Homes, Shelters, and Single Room Occupancy situations. DHCD allows the weatherization of shelters and group homes in accordance with 440.22 (f). Prior approval from DHCD is required in all cases.

The Massachusetts utilities have a very active, well-funded Low-Income Multi-Family Energy Efficiency Program (LIMF) administered on behalf of the WAP Network by the Low-Income Energy Affordability Network (LEAN) and Action for Boston Community Development (ABCD), the WAP Subgrantee in the Boston area. More information about that program is available here: <http://leanmultifamily.org/>

High priority ranked eligible households in small multi-family buildings that may not be eligible for services through the LIMF may receive services through the DOE WAP. These will typically be smaller townhouse type apartments or condominiums. If the unit is individually heated and located in a building with less than 25 units, the weatherization measures will be determined by the use of the NEAT audit on the eligible unit.

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If a WAP Subgrantee proposes to use DOE WAP funds to weatherize a multi-family building (5 or more units) with a common heating system using DOE WAP funds, the Subgrantee must seek prior DHCD approval, complete an energy audit using an approved DOE multi-family audit tool (TREAT, EA-QUIP, etc.), and develop a list of proposed measures and costs. DHCD will evaluate the proposal to determine if the project is an appropriate investment of DOE funds based on proposed energy savings, benefits to eligible clients, availability of leveraged resources, and the impact on other potential eligible entities considering current production and funding limitations. If the project is determined to be a worthwhile investment, DHCD will forward all information and a formal request to the Department of Energy's cognizant Project Officer for discussion and consideration prior to giving approval to the Subgrantee.

Small multi-family buildings will be served consistent with the following guidance found in the MA WAP Technical Manual and Policies and Procedures Manual:

**GUIDELINES FOR THE WEATHERIZATION OF**  
**MULTI-FAMILY RENTAL BUILDINGS**

Following is the procedure for weatherizing buildings with two or more units.

**A. Buildings with less than 50% of the dwelling units eligible**

When less than 50% of the dwelling units in a building are eligible for weatherization, the following procedure is mandatory:

- In eligible units, all applicable major air sealing/general heat waste, heating system, and wall insulation must be completed.
- All common areas (hallways, attics, basements, etc.) that are immediately adjacent to the eligible unit must be weatherized.
- The building's ineligible units cannot be weatherized using DOE WAP Funds.
- Allowable expenditures are limited to those of the eligible unit or units and production credit will be granted for the eligible unit(s) only.

**B. Buildings with five (5) or more dwelling units and 50-65% of the dwelling units are eligible**

When buildings with five (5) or more dwelling units and 50-65% of the dwelling units are eligible for weatherization, the following procedure is mandatory:

- In eligible units, all applicable major air sealing/general heat waste, heating system and wall insulation measures must be completed.
- All common areas (hallways, attics, basements, etc.) regardless of their location in relation to the eligible unit, must be weatherized.
- The building's ineligible units cannot be weatherized using DOE WAP funds.
- Allowable expenditures are limited to those of the eligible units and production credit will be granted to the eligible units only.

**C. 50% of the dwelling units in a two (2) or four (4) dwelling unit building or at least 66% of the dwelling units in any building are eligible**

When 50% of the dwelling units in a two (2) or four (4) dwelling unit building or at least 66% of the dwelling units in any building are eligible for weatherization the Subgrantee may elect either of the following procedures:

1. The Subgrantee may elect to weatherize the entire building including all eligible and ineligible units as well as all common areas. If the Subgrantee elects this option, the following procedure is mandatory:
  - The entire building must be weatherized consistent with the applicable Massachusetts Weatherization Priority List measures regardless of the location of the eligible units.
  - Allowable energy conservation expenditures are limited to a total of \$10,000 multiplied by the number of income eligible units in the building.
  - Health and safety/incidental repair expenditures are limited to \$2,500 multiplied by the number of income eligible dwelling units in the building.
  - Total expenditures are limited to a total of \$10,000 multiplied by the number of eligible units in the building.

A Building Weatherization Report (BWR) must be submitted for each unit completed. Costs that can be directly attributed to that unit should be reported on that unit's BWR (i.e. costs associated with air sealing/general heat waste or wall insulation for that

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unit). Costs associated with common areas in the building can be charged off to the adjacent unit or divided among the units in such a manner that will ensure that the building receives maximum weatherization services. **Ineligible units must be identified in the appropriate category on the BWR.**

- Subgrantees must ensure that the regulatory maximums for energy conservation and health and safety/incidental repair are not exceeded on any individual BWR.

2. The Subgrantee may elect to weatherize only the eligible unit or units and common areas in the building. If the Subgrantee elects this option, the following procedure is mandatory:

- All applicable major air sealing/general heat waste, heating system, and wall insulation measures must be completed for the eligible unit(s).
- All common areas (hallways, attics, basements, etc.) regardless of their location, must be weatherized.
- The building's ineligible units cannot be weatherized using DOE WAP funds.
- Allowable expenditures are limited to those of the eligible unit or units and production credit will be granted for the eligible unit(s) only.

The guidelines for the weatherization of multi-family rental buildings apply only to buildings where a minimum of one dwelling unit is occupied by a tenant. Privately owned condominiums and cooperatively owned buildings may not receive assistance under these guidelines (including provisions for weatherizing income ineligible units) unless one or more units is occupied by a tenant. These privately owned units may receive assistance on an individual basis, based on the eligibility status of the owner.

**D. Weatherization of Vacant Units**

A vacant unit almost always must be considered an ineligible unit. Vacant units **cannot** be weatherized using LIHEAP Funds. The only case in which a vacant unit may be weatherized as an eligible unit is when the building is being rehabilitated under a local, state, or federally funded rehabilitation program in conjunction with CDWAP. Weatherizing these units requires DHCD prior approval under the Special Projects guidance in all instances.

Subgrantees may not sign "Vacant Unit" agreements with building owners on the promise that the units will be occupied by eligible tenants outside of the CDWAP process.

**E. Multi-Family Dwelling Client Prioritization Policy**

DHCD will waive the mandatory client priority requirements in those cases in which the weatherization of an entire building is possible, and at least one dwelling unit in that building is classified as a priority client. In these cases, the cost-effectiveness of the whole house approach will take precedence over the priority status of the remaining units in the building. This waiver does not apply to any income ineligible units in the building.

Describe the deferral Process

There are circumstances when it is appropriate for a WAP agency to defer or provide no weatherization services to an otherwise eligible unit until an unsafe or potentially dangerous condition is remedied. The health and safety of clients, Subgrantee staff, and weatherization contractors is of primary concern. All personnel must maintain a high level of awareness concerning the potential hazards associated with the weatherization process in situations that may involve health and safety concerns or other problematic issues. The Massachusetts Health and Safety Guidance outlines many of the specific criteria that require a deferral of services and provides a "Deferral of Services Notice," to be signed by the local agency and client that outlines the reason for the deferral and conditions that must be remedied before the work can commence. Some of the typical reasons for deferral include: structural condition of the building, existence of any number of health and safety concerns, (i.e. excessive mold, sewerage, animal waste, pest infestations, etc.), and illegal activities being conducted on the premises. Copies of the Deferral of Services Notice is left with the client, maintained in the Subgrantee client file, and provided to DHCD. The deferral policy does not mean that assistance is never to be provided, but "that services must be postponed until the problem(s) can be resolved and/or other sources of help are found." DHCD requires Subgrantees to act as advocates for clients with health and safety concerns, refer the households to available services, and do their best to ensure that problems are resolved so that the weatherization work can eventually be performed. LIHEAP, CSBG, and WAP Subgrantees within the Community Action Programs network in Massachusetts developed a shared Benefits Enrollment Coordination (BEC) database that provides staff with access to information about a variety of available housing and health related programs that expand their capacity to locate help for client deferral issues. When problems of a unique nature exist that are not identified in the Health and Safety Guidance, DHCD staff should be consulted by agencies before deciding whether or not to proceed with weatherization services.

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**V.1.3 Definition of Children**

Definition of children (below age): 7

**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.

DHCD recommends that a Tribal Organization not be treated as a local applicant eligible to submit an application pursuant to 10 CFR 440.12 (b)(5). Assistance to low-income tribal members is equivalent to the assistance provided to other low-income persons in Massachusetts.

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

In FY 1996, DHCD reduced the service delivery network of Subgrantee agencies from 24 to 12. The consolidation was necessary due to the 47% cut in DOE funding. Twelve (12) Subgrantees were selected from within the existing provider network consistent with the criteria listed in 10 CFR 440.15. Many Subgrantee agencies that were not selected in the new network have maintained a contractual relationship with the Subgrantee that took over the service territory. Factors used in determining the service delivery network included:

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

Eleven (11) of the WAP Subgrantees in Massachusetts are Community Action Agencies and one (1) is a non-profit housing agency; all current Subgrantees have administered successful weatherization programs and utility-funded energy efficiency programs for many years. Through ongoing monitoring as well as training and technical assistance, DHCD continues to ensure that all Subgrantees maintain administrative, programmatic, and technical staff capable of operating a successful program and continue to stay current with WAP Best Practices.

All areas of the state are served by the Massachusetts Subgrantees. Each WAP Subgrantee has a specified service territory based on Massachusetts incorporated cities and towns. The cities and towns of each service territory are listed as an Exhibit in the Attachment A of the Subgrantee's Contract for Services with DHCD.

**V.3 Priorities for Service Delivery**

DHCD has consistently geared a high percentage of its production quota to weatherizing the units of low-income elderly, disabled, households with young children under seven (7) years of age, and high energy users. DHCD has set Subgrantee contractual goals for providing service to priority households. The minimum goal for households with an elderly or disabled member are twenty (20%) and ten (10%) percent respectively. The actual number of elderly households served is typically significantly higher, in some areas over 50%. The minimum goal for households with children under seven (7) years of age is fifteen (15%) percent.

DHCD has implemented a mandatory statewide client priority system that gives priority to elderly, disabled, households with children under seven (7) years of age, and high energy users identified through the LIHEAP High Energy Cost Supplement Program, which identifies those LIHEAP clients experiencing a high-energy burden. Actual client fuel use information provided by this program allows the WAP agency to identify high-energy users and target those users for additional weatherization priority points. LIHEAP operators are required to provide WAP operators with a priority ranked ordering of eligible clients based on the following priorities and corresponding points:

- Elderly - 3 points
- Disabled - 2 points
- Children under 7 - 2 points
- High Energy Use - 2 points

Those applicants with the highest overall point total will receive priority service. Subgrantees must document their outreach process to high priority households. DHCD allows Subgrantees to set-aside up to twenty-five (25%) percent of their annual production for the weatherization of "hardship" households. These

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households can be weatherized outside of the established priority system criteria, provided that documentation of the hardship is included within the client file. Allowable "hardships" might include:

- An excessive energy burden and/or consumption not previously identified by LIHEAP.
- A condition that endangers the health and safety of the eligible low-income household.

Subgrantees are also permitted to provide services to income-eligible low priority households in small (2-4 unit) multi-family buildings if other units in that building are occupied by high priority clients. In many instances, this enables a Subgrantee to weatherize an entire building using a combination of DOE WAP and leveraged utility funds.

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

According to the 2012 IECC climate zone map, all of Massachusetts is within climate zone 5. With the exception of parts of Western Massachusetts and Cape Cod, all areas are within a reasonable range of Heating Degree Day requirements according to the NOAA National Weather Service data. For the purposes of the WAP, DHCD is regarding the entire state as having a uniform climate. DHCD believes these variations are not large enough to warrant a revision in the allocation formula. However, Subgrantees can use local climate conditions to determine the SIR of weatherization measures based on an appropriate Degree Day requirement for their area.

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

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

The primary technical guidance for the WAP is the NREL/DOE Standard Work Specifications (SWS) and the Massachusetts Weatherization Field Guide which is linked to the SWS. The Weatherization Field Guide is available to WAP Subgrantee program staff, Energy Auditors, Inspectors, and contractors working with local Subgrantees. It is available as an online manual and a .pdf file with imbedded hyperlinks to the DOE/NREL SWS. The link to the Field Guide was emailed to all WAP Subgrantee staff and the Field Guide is posted on DHCD's website. The [Massachusetts Weatherization Field Guide](#) has been distributed as a spiral bound printed manual that include references to the appropriate SWS for the measures described. The printed manuals were distributed to WAP Subgrantees by DHCD for distribution to their staff and WAP contractors. The electronic version of the Field Guide is currently being revised to update several sections as well as combustion safety testing to comply with the BPI 1200 Standard that was adopted by DOE in the Standard Work Specifications.

Most Massachusetts WAP Subgrantees have moved to a tablet-based energy audit data collection format and the Weatherization Field Guide with links to the SWS is installed on the tablets.

DHCD required a signed addendum to the DOE WAP Attachment A Scope of Services between the WAP Subgrantee and DHCD that provides acknowledgement of the requirements of the SWS and the Massachusetts Field Guide, a DOE approved energy audit, and/or approved Massachusetts WAP Priority list (consistent with 10 CFR 440.21), and 10 CFR 440 Appendix A and other related technical guidance issued by the Grantee. WAP Subgrantee Contract for Services with weatherization contractors must also include a signed addendum acknowledging receipt of the Massachusetts Field Guide and SWS and that the Contractor agrees to work to those standards. (Samples of both are attached to the State Plan).

##### **Additional Program information**

During the FY 2017, WAP Subgrantees may spend up to \$10,000 on any individual eligible dwelling unit in cost-effective Program Operations, including incidental repairs and health and safety funds (excluding Subgrantee Program Support funds). Subgrantee Program Operations average expenditure per unit is budgeted at \$4,725, plus an additional average \$625 for health and safety measures. DHCD has established an incidental repair maximum per unit of \$2,500. Based on costs reported in previous grant periods, DHCD expects that this maximum expenditure will be rare and used only when there are extensive, unusual needs in the dwelling. DHCD's approved WAP Priority Measures list requires that when expected incidental repair costs reach \$1,500, a DOE-approved audit must be completed on the unit and all DOE WAP funded measures must achieve a Savings to Investment Ratio (SIR) of 1 or greater.

Subgrantees in Massachusetts have a substantial amount of utility funding available for energy efficiency improvements. The amount of utility funding far exceeds the amount of DOE WAP funds. Each unit weatherized with utility efficiency program funds can receive up to \$4,500 for building shell efficiency measures, \$4,500 for heating system replacements (additional funds up to \$7,500 are available with a waiver), and additional funds for electric base load measures (primarily refrigerators and lighting improvements). The utility funding may be used independently or in conjunction with DOE WAP funds.

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The following is a general list of the weatherization work to be done in an eligible unit:

- a) Blower door directed air sealing of major by-passes, key junctions, and leaking ductwork;
- b) Repair and/or clean and tune primary heating system;
- c) Repair or replace the primary heating system. Must be reported as a health and safety measure unless the SIR is 1 or greater. All heating system work will be completed using alternative funding from a LIHEAP funded heating system repair and replacement program (HEARTWAP) administered by DHCD and operated locally by Subgrantees;
- d) Insulate attic (after completing comprehensive blower door directed air sealing), sidewalls (dense pack), perimeter, floor, and ductwork or hydronic heating pipes to appropriate R-values as determined by the SWS and 2012 IECC;
- e) Install energy efficient lighting and other cost effective electric base-load measures (using utility funding).

#### Heating System Improvements

DHCD continues to emphasize the upgrading of heating systems as an integral part of the weatherization process as well as making a home safer and more energy efficient. While heating system improvements will remain as a priority measure within the NEAT generated WAP priority system, DOE funds are to be used primarily for building shell measures because of the availability of alternative funding specifically designated for heating system work. WAP Subgrantees administer a closely coordinated LIHEAP-funded Conservation Set-Aside program, HEARTWAP, for heating system repairs and replacements.

Subgrantees must access the HEARTWAP program and utility funds for necessary heating system work prior to considering the use of DOE funds.

In the rare instance when heating system work is performed with DOE WAP funds, Subgrantees must charge work to the Program Operations, Incidental Repair, or Health and Safety categories and comply with the following protocol: All costs associated with heating system measures using DOE WAP funds must be itemized and reported on the Building Weatherization Report (BWR). All work must be completed consistent with the requirements of Section 5.3 of the SWS. Subgrantees must ensure that they do not exceed the maximum allowable expenditure for the unit. Heating system work performed with WAP funds must be closely coordinated with HEARTWAP and utility programs to ensure that clients do not receive redundant assistance from alternative funding sources. Heating system replacements and asbestos abatement should be performed with HEARTWAP funds, unless otherwise authorized by DHCD staff. Heating system replacements performed with WAP funds must receive prior DHCD approval utilizing the replacement request policy in the HEARTWAP Guidance. When DOE WAP funds are used to replace a heating system, the expenditure must be reported as a health and safety measure or meet the SIR of 1 or greater requirement using a DOE approved energy audit. Subgrantees must utilize WAP, HEARTWAP, and utility funds in such a manner that will ensure that the greatest number of low-income clients will receive weatherization and heating system assistance.

Subgrantees must also ensure that they provide a cost-effective retrofit package consisting of building shell measures (air sealing, insulation, and required health and safety measures) and heating system services to all dwelling units, which receive DOE WAP assistance. DHCD strongly encourages Subgrantees to leverage landlord contributions, utility funds, and any other source of supplemental funding to ensure that each building weatherized receives a comprehensive package of energy efficiency measures.

In addition to the requirements of Section 5.3 of the SWS, the technical, administrative, and programmatic standards and requirements regarding heating system measures which are mandated in the "HEARTWAP Program Guidance" are applicable to WAP funded heating system work. In instances where there may be a conflict between the HEARTWAP Guidance and the provisions of the SWS, the protocols required in the SWS are required if DOE WAP funding is used.

#### Incidental Repairs

Major building rehabilitation is beyond the scope of the Weatherization Assistance Program and not the intention of the program. WAP Energy Auditors, however, often encounter dwellings in poor structural condition. Dwellings whose structural integrity is in question must be referred to a home rehabilitation related program wherever available. Weatherization services may need to be deferred using the Deferral of Services policy until the dwelling can be made safe for Auditors, Inspectors, contractor's crews, and occupants. Only incidental repairs necessary for the effective performance or preservation of weatherization installations are allowed. Major repairs are considered those with costs exceeding \$500. Examples of major repairs may include: repairing roof leaks, repairing areas of unsafe wiring, or replacing sections of knob and tube wiring to allow for the installation of insulation in attics and sidewalls. Other minor repairs under \$500 include: cutting and finishing accesses to attics and knee wall areas, repairs to siding, minor repairs to windows and doors, flashing, and masonry repairs.

WAP Subgrantees are able to provide repairs up to \$2,500 per unit inclusive of labor and material. The typical cost of repairs in a unit will be significantly less. Given the poor condition of some the housing stock and the limitations that this condition places on the amount of weatherization a unit can receive, DHCD is providing the relatively high maximum allowable cost for repairs to enable Subgrantees to provide weatherization benefits to *those few units in the most need and where significant investments from alternative sources for energy efficiency work (utility funds) can only be completed if repairs are completed.* DHCD encourages Subgrantees to identify and access alternative funding sources for those units needing extensive repairs. Of the 435 FY 2016 reported jobs to date, the average cost per unit for incidental repairs was approximately \$404 while only ten (10) units

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had incidental repairs in excess of \$1,500 and five (5) units in excess of \$2,000.

Incidental repairs are allowable to the extent that they are necessary for the effective performance or preservation of an eligible weatherization measure. In addition, consistent with DOE WAP Program Notice 12-09, the cost of incidental repairs must be included in the overall SIR of 1 or greater for package of weatherization measures for DOE funded work. Massachusetts WAP Subgrantees use a NEAT Generated Priority List to determine the weatherization measures to be completed on most units. The Audit Waiver approval did include NEAT audit runs which included repairs in the cost-effective determination of priority measures and in most cases it did not impact the SIR of the proposed measures. However, to make certain that the needed incidental repairs do not create a cost-effectiveness problem, Subgrantees must use a DOE approved energy audit when repairs over \$1,500 are needed to make certain that the package of proposed DOE-funded weatherization measures meets the SIR requirement. In all cases, the WAP client file must provide clear documentation of the need for the repairs and the allowable energy conservation measures that are enhanced or protected directly related to the repair. Documentation must include pictures and/or concise descriptions of the repairs needed and invoiced by the installing contractor.

#### Asbestos Abatement

General asbestos abatement is not an allowable health and safety cost in the DOE WAP. In those rare instances when DOE WAP funds may be necessary for the abatement of asbestos, removal is allowed only to the extent that energy savings resulting from the measure will provide a cost-effective savings-to-investment ratio including the cost of abatement. Where permitted by code or EPA regulations, less costly measures that fall short of asbestos removal, such as encapsulation, may be used. Insulating homes with asbestos cement shingle sidewalls may be completed in accordance with the guidance issued by the Massachusetts Department of Environmental Protection.

#### V.5.2 Energy Audit Procedures

Audit Procedures and Dates Most Recently Approved by DOE

**Single-Family :** N.E.A.T. Generated Priority List approved December 2014

**Manufactured Housing :** M.H.E.A. Generated Priority List approved December 2014

**Multi-Family :** N.E.A.T. Generated Priority List approved December 2014 (see comments)

#### Comments

DHCD implemented an updated DOE-approved NEAT and MHEA generated priority listing and accompanying sample dwelling type system effective during the 2014 Program Year. This has ensured that only the most cost-effective measures are installed in eligible dwelling units using DOE WAP funds and appropriate savings-to-investment ratios are maintained. As part of the submission, DHCD received approval for use of the NEAT generated priority list for certain multi-family buildings with the following provision:

Multi-family (5 or more units): DHCD proposes to use this same priority list for the few small multi-family homes that are completed using DOE WAP funds. The majority of buildings larger than 4 family where DOE WAP funds are used are garden-style apartments or condos, typically 2 floors or less with separate heating systems with units having interior common walls. In some instances, agencies will weatherize a 6 family dwelling that is essentially two triple-deckers with a common wall. Because of the large amount of utility funding available to the WAP Network in Massachusetts, and the ability to treat the whole building and leverage significant resources, DOE funds will be used in very few, if any, larger multi-family buildings. If and when DOE funds are used, the work will be based on the use of a DOE-approved energy audit for multi-family buildings. If a large multi-family building is weatherized with DOE funds, DHCD will be sure to bring this to DOE's attention so approval can be given prior to work commencing.

DHCD recognizes the importance of DOE's audit requirements and will continue to train WAP Subgrantee staff on the use of NEAT and MHEA. An audit run will be required on dwellings that are outside of "typical" conditions, when the measures proposed are allowable, but are not listed on the approved priority measures list (and all priority measures are addressed) and when incidental repairs over \$1,500 are being considered as part of the project.

When the web-based version of NEAT and MHEA is released by DOE/ORNL, DHCD plans to work with our software vendor to integrate it into the WAP Management and Reporting software used by WAP Subgrantees. The Massachusetts WAP Subgrantee-

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based training center, the Green Jobs Academy, and our software vendor, Community Software Group, have been in discussion with ORNL staff about the possibility of BETA testing the web-based NEAT audit when it is available. The Massachusetts software currently allows Subgrantees to populate information directly from the client's LIHEAP applications, has a variety of WAP forms built in, can upload energy inspection/audit information from tablets used by Energy Auditors, generate work order forms, quality control forms, and report detailed required expenditure and demographic information to DHCD. The integration of NEAT with minimal additional data entry would be a significant enhancement to the DOE WAP operations in Massachusetts.

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

During the past Program Year, DHCD continued the training and certification process for Quality Control Inspectors consistent with the DOE Quality Work Plan requirements.

As of the date of the submission of the State Plan application, Massachusetts has 32 individuals that have been certified through the Home Energy Professional (HEP) Quality Control Inspector (QCI) process. Each WAP Subgrantee has at least one certified QCI inspector; several have 2 or more.

Massachusetts has and will continue to use the resources of the IREC Accredited training center and the Green Jobs Academy (a subsidiary of a Massachusetts WAP Subgrantee) to complete the QCI training provided a sufficient number of candidates are available to complete the week long training. Training will typically be scheduled quarterly. If new staff or a current Auditor is seeking certification and the GJA is unable to assemble a class of 4-5 trainees, the Subgrantee staff will be encouraged to schedule training with the New York State Weatherization Director's Association (NYSWDA) training center or another approved training center. QCI training and certification at any authorized center is an allowable T&TA expense.

All WAP Subgrantees must have a standardized quality control procedure based on the criteria of the HEP QCI requirements to assess that the initial energy audit is in compliance with the DOE approved Massachusetts WAP Priority List or a DOE approved energy audit as well as with audit procedures required by 10 CFR 440.21, with 10 CFR 440 Appendix A and the DOE Standard Work Specifications (SWS). The procedure must assess the quality of the weatherization or mechanical work performed by the private sector contractors, and compliance with the SWS and the Massachusetts Weatherization Field Guide. All final inspections must be completed by an individual certified under the HES QCI protocol. The final inspection must be signed and dated by the certified QCI Inspector prior to the unit's submission to DHCD.

The Weatherization Field Guide linked to the Standard Work Specifications has been provided to WAP Subgrantee program staff, Energy Auditors, Inspectors, and contractors working with local Subgrantees as an online manual and as a .pdf file with embedded hyperlinks to the DOE/NREL SWS. The link to the Field Guide was e-mailed to all WAP Subgrantee staff. The Massachusetts Weatherization Field Guide is also available, and has been distributed, as a spiral bound printed manual that includes references to the appropriate SWS for the measures described. The printed manuals were distributed to WAP Subgrantees by mail and hand-delivered by DHCD for distribution to their staff and WAP contractors.

To ensure that all inspections are aligned with the SWS, DHCD and the WAP Subgrantee network are working with the Green Jobs Academy (GJA) to develop a standard quality control form to be used statewide. The process is designed to enhance the function of the QC form in the WAP software package currently used by Subgrantees to create a SWS linked form that is specific to the measures completed on the unit. It will include the required documentation for health and safety testing, combustion safety testing, ASHRAE compliance, confirmation that the original audit and installed measures were appropriate for the unit, and a required sign-off by the Inspector. The form will be available as a printed hard copy as well as a digital version for use on tablets.

To ensure that Subgrantees understand that all work completed using DOE WAP funds is in compliance with DOE WAP requirements, the WAP Subgrantee Energy Director must sign an Addendum to the Attachment A of the contract with DHCD that clearly defines those requirements. The Addendum is attached to the State Plan. A similar required Contract Addendum must be executed between WAP Subgrantees and private-sector contractors that complete DOE WAP work.

Both the WAP Subgrantee acknowledgement and the acknowledgement between the Subgrantee and contractors must be signed and forwarded to DHCD. Samples of the agreements are attached to this State Plan.

Final quality control inspections must incorporate all required health and safety testing including combustion efficiency, CO testing of all combustion appliances, CAZ testing of all vented combustion appliances, and confirmation of ASHRAE 62.2-2016 compliance. Subgrantee contracts with DHCD require this quality control procedure and part of every client file review includes

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verification that a quality control inspection was completed by a certified QC Inspector and fully documented. The Building Weatherization Report (BWR) submitted monthly for completed units includes a certification from the QC Inspector that the unit and final inspection was completed consistent with DOE WAP standards.

In addition to the required final inspection, Massachusetts WAP Subgrantees are contractually required to complete and document in process inspections while the WAP contractor is on-site at a minimum of 50% of the units. Many Subgrantees do in-process inspections on all jobs to check on progress, discuss any issues and inspect attic air sealing work. WAP contractors are also required to provide photographic documentation of any air sealing work in an attic area that has insulation added before an agency staff member is able to visually inspect the work.

DHCD will follow DOE's WPN 15-4 Section 3 model that permits an independent Auditor/Quality Control Inspector. This provision allows Subgrantee staff to complete both the energy audit and quality control inspection of a unit provided that the Inspector is QCI Certified. In all cases, the individual will not be part of the crew that completes the installation. Some Subgrantees with a small technical staff will only have a single QCI certified individual and the need for staff productivity in those Subgrantee areas is an important consideration. DHCD will focus additional monitoring efforts on those units. DHCD QCI certified staff will complete a full QCI inspection on no less than 10% of the units completed by a Subgrantee with an emphasis on those units where the QCI Inspector was also the initial Auditor.

If during the course of monitoring visits, DHCD determines that a certified QC Inspector is not completing final inspections consistent with all DOE WAP requirements, DHCD will implement a course of corrective action that will include the following steps:

DHCD will first work with the individual to determine if additional training is needed and identify the problem areas. Specific areas of needed training will be determined and training opportunities for those areas will be identified and required. As an example, if the QC Inspector is not completing a CAZ test consistent with DOE WAP requirements, DHCD will require the individual to attend and successfully pass the 4 hour Combustion Safety training provided by the Green Jobs Academy. DHCD will also identify additional inspections completed by the Inspector and monitor those units. If additional issues are identified, that person will be prohibited from completing quality control inspections until DHCD determines, based on additional training, that he/she can and will complete the inspections consistent with QCI requirements. If additional training does not adequately address the need in the judgment of DHCD staff, the individual will be prohibited from completing quality control inspections on DOE WAP units. DHCD also will initiate the process of de-certification consistent with BPI protocols.

The Grantee **Weatherization Field Report** monitoring form is attached to the State Plan.

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

### **Subgrantee Effectiveness**

The primary mechanism that DHCD utilizes to ensure the effective implementation of the DOE WAP is through consistent and regular monitoring as described in Section V.8.3.

DHCD reviews and tracks Subgrantee unit production and expenditures on a monthly basis to determine that they are on track to meet production and expenditure goals. Through data analysis and desktop monitoring (BWR reviews, statistical frequency of WAP measures completed, and pre and post blower door readings) as well as monthly on-site and field visits, DHCD works with Subgrantees to ensure that the appropriate priority WAP measures are completed consistent with the DOE approved Massachusetts WAP Priority List or a DOE approved energy audit as well as with audit procedures required by 10 CFR 440.21, with 10 CFR 440 Appendix A and the DOE Standard Work Specifications (SWS). DHCD staff compare measures completed as well as blower door information to identify Subgrantees that are consistently completing the most effective measures (and saving the most energy) and those that are not achieving these parameters. DHCD uses the data to identify potential training needs or Subgrantees that may need additional monitoring. DHCD will recommend peer-to-peer exchanges to assist lower performing Subgrantees.

If a Subgrantee is falling behind its production schedule or DHCD observes a pattern of unusual costs, DHCD will contact the Subgrantee's Energy Director to review the information to determine if there are problems which warrant development of an appropriate action plan. In the case of production issues, the Subgrantee will be required to provide DHCD with a detailed planned production schedule, any measures they are taking to ensure that production and expenditure goals are achieved, and report to DHCD on a weekly basis through an e-mail report on the number of completed units, units issued to weatherization contractors, and units audited/inspected. DHCD will verify the information during the next scheduled site visit. If there are cost

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or appropriate measure installation concerns, DHCD will first discuss the concerns and focus monitoring efforts as needed.

**How Comparisons are used to identify training and technical assistance needs**

DHCD compares the production numbers (as a percentage of the overall goal) and uses data analysis of the measures completed and blower door pre and post tests on DOE WAP units of the Subgrantees to identify areas that may need additional monitoring or technical assistance to ensure that Subgrantees are in compliance with program requirements. Data analysis of measures completed as well as associated costs and effectiveness of the work help direct T&TA activities towards areas of greatest need. As an example, relatively high air sealing costs on units that showed a less than expected CFM@50 reduction will be used to identify those units for monitoring inspections as well as potential training on targeted air sealing and zonal pressure diagnostics for the WAP Inspector and the contractor that completed the work.

While DHCD has not conducted a detailed evaluation of cost-effectiveness, the State believes the WAP in Massachusetts to be highly cost-effective because it limits the use of DOE funds to only those measures that have proven to be cost-effective by a DOE Approved Energy Audit (NEAT/MHEA) or the DOE approved MA Priority List and DOE National Evaluation results. Plus, it maintains high work quality standards while following Best Practices in the energy efficiency industry.

The type of work completed does not vary significantly from Subgrantee to Subgrantee. Most dwellings typically receive targeted air sealing in attics and basements/crawlspaces (including ductwork), attic insulation for homes with lower levels of existing insulation, and dense-pack sidewall insulation. All work is coordinated with available utility funds. Required heating system improvements are referred to the LIHEAP-funded HEARTWAP.

In addition, energy savings evaluations done by the Massachusetts gas and electric utilities completing similar measures in their low-income residential programs confirm that the programs are cost effective.

**Incorporating Training Capability Assessment and Monitoring Feedback**

Most training sessions incorporate an evaluation of the training by the participants. DHCD and individuals involved in the training activities review the evaluations and use the information to improve presentations and adapt training to the needs of the participants.

The many methods that DHCD uses to evaluate local agency effectiveness in program delivery are intended to identify potential weaknesses so as to target our continued effort at improving the technical capabilities of local agency staff and contractors while assuring high quality work. These are outlined in the narratives of the V.5.3 Final Inspection, V.8.3 Monitoring Activities, and V.8.4 Training and Technical Assistance sections of the State Plan.

DHCD completes field visits to WAP Subgrantees every 4-6 weeks and will inspect complete QCI inspection units during each visit. If there are call-backs as a result of the visit, Subgrantees must make the required corrections and notify DHCD when the work has been completed and inspected. Each field visit also includes a review of a selection of client files. Each site visit and file review incorporates an evaluation of the quality of the program administration, file structure, energy audit/inspection procedure, job orders, and quality control inspections. DHCD WAP staff meets weekly to discuss the results and any findings or problems from the site visits as well as any other issues concerning Subgrantee management, energy Auditor/Inspectors, and weatherization contractors. As a group, we discuss the strengths and weaknesses of the Subgrantee management and individual members of the Subgrantee technical staff as well as contractors. The discussion aids in identifying and planning additional training and peer to peer opportunities. We look for consistent good quality and when it is necessary, improvement in all functions of the program. For example, if during a site visit, DHCD observes an Auditor or Inspector's questionable decisions regarding the weatherization work specified or the work quality of a weatherization contractor, we will review and discuss previous experiences with the Subgrantee Auditor and the supervision of the Program Coordinator who oversees the work. We will review DHCD data to determine what type of training and certification they process. We will use the information to identify training needs which may be conducted one-on-one with a Technical Field Representative, peer to peer with another local agency Auditor, or a training center course. Follow-up visits will be scheduled to determine if there has been improvement or additional training is needed.

Similarly, if DHCD observes work by a private-sector weatherization contractor that is not up to program installation or quality standards, we will review and discuss past reports and previous experiences at all Subgrantees where the company works. We discuss our concerns with all Subgrantees that use the contractor. DHCD will set up additional monitoring visits and target the work of that contractor. Any work that requires correction will be completed by the contractor at no cost to the program. If it is determined that additional training is needed for the contractor and its crew, DHCD and the Subgrantee(s) will identify an appropriate format (i.e. on-site with trainer, Technical Field Rep, Subgrantee Auditor, or training center combination of classroom/hands-on lab). No additional DOE funded work will be awarded to the contractor until they demonstrate to DHCD the ability to complete installations consistent with program standards. All call-backs are tracked by the Subgrantee. Subgrantees are required to provide documentation on all call-backs.

**Continuous Improvement in the Program**

As outlined in the previous section, DHCD consistently monitors Subgrantee activities and discusses opportunities and methods to improve the technical, programmatic, and administrative functions in the program. When issues are discovered during

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monitoring visits, DHCD works as a team to determine the most appropriate response whether that is additional monitoring, technical assistance, or training. When appropriate, monitoring is increased and will include a full administrative/programmatic monitoring focused on the area of concern.

In Massachusetts, the utility funding available to income eligible families for energy efficiency programs far exceeds the DOE WAP funding. The Massachusetts utilities contract directly with a "Lead Agency" which then subcontracts with WAP Subgrantees in multiple service areas. As a member, DHCD partners with the Low-Income Energy Affordability Network (LEAN) (lead agencies and advocacy groups), the Green Jobs Academy, and the LEAN subsidiary--the Best Practices Group (Utility Program Administrators). To ensure the success of the entire network, this coalition determines the best methods of coordinating services to low-income families with the resources available, identifies and discusses training needs of the WAP/Utility network, as well as the most efficient method to deliver the necessary training and technical assistance to those Subgrantees that may be underperforming.

**Subgrantee Performance Tracking and Final Inspection Failures and Improvements**

DHCD reviews Subgrantee production and expenditures by category (energy conservation, repairs, health and safety, etc.) each month using a spreadsheet available to all staff members. The spreadsheet calculates average cost per unit in each of the categories. If something appears unusual, DHCD will contact the Subgrantee's Energy Director or notify by e-mail about the issue. DHCD Field Staff track all inspections completed during monitoring visits including: QCI visits (to ensure that DHCD meets the minimum 10% requirement per Subgrantee), in-process inspections of contractors on-site, and any call-backs. Call-back resolution is tracked through the system and the local agency is notified. If there are failed final inspections by the Subgrantee, then the resolution of the issue is tracked and DHCD identifies additional training and monitoring needs, consistent with Section V.5.3 Final Inspection. DHCD recommends and/or requires additional training of Subgrantee QCI Inspectors and contractors based on failed inspections. During the past program year, DHCD observed fewer final inspection discrepancies as Subgrantee QCI Inspectors became more familiar with the process and expectations and were able to improve their skills as well as address expectations and quality of work issues with contractors and their crews.

**Subgrantee Management and Financial Findings or Concerns**

DHCD has not had significant management or financial findings in any of the current WAP Subgrantees in recent fiscal years. Concerns related to Subgrantee WAP staffing transitions, QCI certification requirements, and potential implications on WAP unit production have been addressed. Generally, the 12 WAP Subgrantees are in a strong position to administer an accountable and successful DOE WAP.

**Program Management and Systems Improvements**

While DHCD is proposing no specific management improvements or changes in the technical or financial systems during FY 2017, we consistently look for ways to improve the management, financial, and programmatic systems used to operate the DOE WAP. DHCD hired a new WAP State Manager in July 2016 to replace the previous State Manager who retired. DHCD will use this hiring opportunity to review all systems that are currently in place to determine where we can improve operations.

**Market Analysis**

To determine whether the cost of installed measures is appropriate, DHCD reviews the pricing structure for the state's non-low-income utility-funded energy efficiency program called Mass Save. The most recent review in February 2016 indicated that the installed costs for measures are comparable in the WAP. The fact that the WAP prices are comparable is significant especially considering that the utility programs are much larger in the amount of work available and have significantly less quality control, oversight, and training requirements. DHCD also informally checks with suppliers about the cost of materials (i.e. bags of cellulose, fiberglass insulation, door weather-stripping, two-part foam packages, etc.).

**V.7 Health and Safety**

The Massachusetts Health and Safety Guidance is included as an attachment to the State Plan using the DOE Health and Safety Template.

Of the 435 FY 2016 units reported to date, the average cost per unit for health and safety was approximately \$302.

**V.8 Program Management**

**V.8.1 Overview and Organization**

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Organization

Staffing Pattern/Responsibilities

The overall responsibility for the U.S. Department of Energy's Weatherization Assistance Program (DOE WAP) for Low-Income Persons rests with the Undersecretary of the Department of Housing and Community Development (DHCD). The program is operated on a day-to-day basis by the Energy Conservation Unit (ECU) of the Division of Community Services (DCS).

DHCD is the primary agency that deals with housing and self-sufficiency issues in Massachusetts through the administration and management of public housing programs, subsidized housing programs, affordable housing, and home ownership programs. The DCS within DHCD deals with other state, local, and regional agencies, nonprofit organizations, and municipalities working to maximize available resources and programs to create and enhance long-term self-sufficiency and opportunities for communities, families, and individuals. The Community Development Block Grant (CDBG), the Community Services Block Grant (CSBG) program, the Low-Income Home Energy Assistance Program (LIHEAP), and other self-sufficiency, economic development, and community-based programs are operated within the Division. The Energy Conservation Unit within DCS is responsible for the DOE WAP, the Heating Emergency Assistance Retrofit Task Weatherization Assistance Program (HEARTWAP—the LIHEAP Conservation Set-Aside funded heating system repair and replacement program), as well as any other weatherization assistance and related energy conservation programs which might be funded through other sources.

The following is a description of the job responsibilities of the DOE-funded DHCD staff:

Supervisor, Energy Conservation Unit:

1. Day-to day management responsibilities for the WAP and other federally-funded low-income energy related programs in Massachusetts.
2. Oversees training and technical assistance to Subgrantees on a state, regional, and local one-on-one basis; issues include all phases of WAP program management and technical issues.
3. Develops WAP management and technical memorandum and guidance.
4. Supervises the Energy Programs Coordinator and the Technical Field Representatives, conducts weekly staff meetings to discuss programmatic and Subgrantee issues/problems and to set priorities for monitoring and training; reviews and approves all Technical Field Representative monitoring reports.
5. Acts as liaison with contractors, manufacturers, and vendors to inform them of program developments and changes.
6. Researches new state of the art developments in materials and installation procedures.
7. Reviews Subgrantee budgets, final reports, production, expenditure rates, and recommends corrective actions where necessary.
8. Represents DHCD as a member of the Massachusetts Low-Income Energy Affordability Network (LEAN).
9. DHCD's member of Massachusetts Best Practices Committee meetings.
10. Responsible for State Plan submission and reporting to federal funding sources.

Energy Programs Coordinator:

1. Assists with WAP Subgrantee Program Assessments and provides technical assistance in the areas of program implementation, management, and service delivery.
2. Assists with the preparation and coordinator of WAP Subgrantee contracts, budgets, and budget amendments.
3. Assists the Energy Conservation Unit Supervisor with the development of WAP policy and program guidance. Maintains and updates the WAP Policy and Procedures Guidance.
4. Assists in the development and coordination of the State Plan.

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| <ul style="list-style-type: none"><li>5. Assists with the planning, implementation, and management of special projects.</li><li>6. Assists with all federal and state reporting.</li></ul> |
|--|

**Technical Field Representatives (2):**

- 1. Schedules and performs field monitoring visits to Subgrantees to ensure program compliance; conducts exit interviews at the conclusion of each monitoring visit; completes written report evaluations for each visit.
- 2. Schedules monitoring visits to be in the field on average four of the five work days per week; schedules time so that all reports are completed on the fifth day in the office.
- 3. Uses experiences during the field monitoring process to identify Training and Technical Assistance needs of local agency staff and contractors.
- 4. Develops on-going and constantly updated understanding and knowledge of new or changing program regulations so that the monitoring is effective, accurate, and consistent.
- 5. Conducts annual WAP Subgrantee Program Assessments and provides technical assistance in the areas of program implementation, management, and service delivery
- 6. Reviews Building Weatherization Reports (BWRs) for accuracy, records and checks unit production, and expenditure information.
- 7. Maintains access to literature detailing new materials or installation techniques.

**Director of Finance and Fiscal Coordinator (within DHCD's Financial Division):**

- 1. Reviews all monthly reports for accuracy; reviews and signs all Payment Voucher Forms for accuracy and program compliance processes to the DHCD Office of Administration and Finance (OAF).
- 2. Processes all completed contracts and amendments through Massachusetts Management Accounting and Recording System (MMARS).
- 3. Develops and provides individual or group technical assistance for Subgrantees which need further fiscal training.
- 4. Ensures that Subgrantees are operating within their budgets; on-going telephone communication with subgrantee fiscal officers to report necessary amendments and/or changes.
- 5. Monitors Subgrantee financial records and periodic cash requests to the Commonwealth.
- 6. Maintains detailed monitoring reports, provides written summaries, and completes follow-up recommendations to the Subgrantee Executive Director, the DHCD/DCS Associate Director, and the Director of Community Services Programs.
- 7. Provides confirmation of payments and grant amounts/expenditures to Subgrantee Auditors.
- 8. Records all fiscal and statistical information in the DHCD records for each Subgrantee by funding source. These records will be kept on spreadsheet in the DHCD Management Information System on the Local Area Network.
- 9. Responsible for the assessment, monitoring, and evaluation of the financial performance of energy conservation Subgrantees across the Commonwealth.
- 10. Gathers and reports statistical and fiscal information upon request.
- 11. Prepares the financial aspects of the DOE quarterly reports.

**Fiscal Monitor (within DHCD's Financial Division):**

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1. Monitors DOE WAP Subgrantee fiscal systems.
2. Monitors DOE WAP Subgrantee Procurement and Inventory systems.
3. Completes detailed monitoring reports.
4. Provide fiscal training and technical assistance to DOE WAP related Subgrantee staff.

#### Systems and Procedures

The primary step in Grantee planning for the DOE WAP is the completion of the State Plan. The State Plan provides Subgrantees the guidelines for the operation of the DOE WAP during any program year. The State Plan is incorporated by reference in the contracts between DHCD and the WAP Subgrantees. Subgrantees are required to report their WAP activities and expenditures to DHCD on a monthly basis. The monthly reports include various expenditure and statistical information. Program requirements at the local level are monitored by DHCD staff.

#### Fiscal Procedures: Grantee and Subgrantee

DHCD has a fiscal system that uses the DOE Monthly Fiscal Report Form in conjunction with a program report that includes all WAP unit expenditures reported on the Building Weatherization Reports (BWRs), to reimburse Subgrantees for their expenses in a timely manner, typically less than 15 days. The reimbursements are electronically transferred to the Subgrantees through the Massachusetts Management, Accounting, and Reporting System (MMARS). When the Contract for Services with the WAP Subgrantee is approved by the Massachusetts Comptroller's Office, DHCD electronically transfers seventeen percent (17%) of the total budget for that year to provide cash flow needed for the start-up of the program. After that initial advance, Subgrantees submit a Monthly Report/Invoice, no later than the 15th of the month for actual expenses incurred in all budget categories in the prior month. At the beginning of the fourth quarter, DHCD Financial and Compliance staff balances expenditures against reimbursements. DHCD staff monitors all monthly reimbursements, relative to the total overall budget per category.

Once the maximum contractual reimbursement is disbursed, funds are no longer provided to the Subgrantee. In this manner, DHCD ensures that a Subgrantee does not receive funds beyond which it is entitled. Subgrantee Administrative and Program Support funds are allocated on a per unit basis. If the Subgrantee does not meet its production goal, it is not entitled to the corresponding Administrative or Program Support. The accountability of grant funds within each Subgrantee is the responsibility of the Subgrantee Fiscal Officer. The Fiscal Officer issues periodic financial statements to participating weatherization Subgrantees, regarding the status of energy funds. These statements include line item accounts of expenditures to date and funds remaining in each line item. Many Energy Directors maintain duplicate copies of the Fiscal Officer's energy ledger. At many Subgrantees, no funds may be expended without the approval of the Fiscal Officer or Executive Director. In some cases, Energy Directors have the authority to sign-off on funds. Each Subgrantee has its own system of accountability for the in-house expenditure of funds. DHCD conducts regular annual fiscal monitoring visits to ensure that Subgrantee fiscal operations are in compliance with all state and federal requirements.

Accountability for tools, equipment, vehicles, and materials, once purchased through the above outlined procedure, are the responsibility of the Subgrantee's Energy Director. All Subgrantees are required by DHCD to maintain an Inventory Control System that classifies "expendable" and "non-expendable" items, indicates their funding source, and at a minimum, describes the item, its purchase price, and location in the Subgrantee. Furthermore, Subgrantee Fiscal Officers are required to record the DOE WAP inventory in their books, so that an accounting of the inventory cost might also be maintained.

#### Non-Discrimination

No person in the United States shall, on the grounds of race, color, national origin, or sex, or on the grounds of any other factor specified in any Federal law prohibiting discrimination, be excluded from participating in, be denied the benefits of, or be subjected to discrimination under any program, project, or activity supported in whole or in part with financial assistance under this part.

The DHCD will pursue any complaints of discrimination in hiring, staffing, or funding the weatherization program that are directed to it. Any and all complaints will be fully investigated and reported to DOE within a reasonable time. Massachusetts also has a Commission Against Discrimination that is empowered to deal with instances of discrimination as described in the regulations. All appropriate complaints will be referred to that Commission and will be coordinated to the maximum possible extent.

Aspects of the Equal Opportunity guidelines have been incorporated into Subgrantee contracts along with all reporting and accountability requirements. Contract compliance is monitored by DHCD technical, fiscal, and program staff, with appropriate recommendations submitted to Subgrantee Executive Directors and energy staff.

DHCD has adopted the appeals process used by the DHCD's Low-Income Home Energy Assistance Program, for client appeals

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related to eligibility for the DOE WAP. The appeal process requirement is included in the WAP agreement between the DHCD and each Subgrantee.

Subgrantees will provide clients with information at the point of application that they are entitled to appeal a finding of ineligibility, based upon the DOE and DHCD guidelines. Clients will have 15 working days to appeal to the Subgrantee, which must reply in writing, stating the reasons for denying or granting the appeal. A client may further appeal to the DHCD having been advised of that right by the Subgrantee, within 15 working days after an adverse finding by the Subgrantee. The DHCD must then reply in writing within 15 working days, informing the client of the result of the appeal and the reasons for the decision. Both the Subgrantee and the Grantee will maintain logs of appeals and the result, open to inspection by the appropriate monitoring entities.

Subgrantees will log all such complaints and make that log available to DHCD and DOE. Complaints that are not resolved at the Subgrantee level will be forwarded to the DHCD who will investigate and determine what actions, if any, need to be taken by the Subgrantee to resolve the situation. The DHCD will also log all complaints and resolutions. The DHCD may directly arrange for the resolution of a problem if the Grantee determines that the Subgrantee cannot rectify the situation. Clients will be informed in writing of a resolution at each stage of the process.

#### Reporting Requirements

The primary mechanism for ensuring compliance with WAP program reporting requirements is the monthly program report required of all Subgrantees. This program report is due to DHCD no later than the 15th of the month detailing the previous month's expenditures. Effective with the FY 2012, DHCD transitioned to a software system that combines Subgrantee fiscal reporting of LIHEAP, HEARTWAP (DHCD's heating system repair and replacement program), as well as fiscal and program reporting of the DOE WAP. The software provides DHCD with enhanced desktop monitoring capabilities and allows greater coordination between fiscal and programmatic reports. This software provides DHCD with Building Weatherization Reports for each WAP job completed and includes expenditure data by category and statistical data related to household characteristics. The program report provides DHCD with the resources to complete desk-top monitoring of expenditures and appropriate weatherization measures as well as the ability to target client files for review in future site visits to the Subgrantee. DHCD is also able to complete accurate quarterly reports to the DOE in a timely manner.

#### Subgrantee Organization

The DOE WAP Subgrantees for the Commonwealth of Massachusetts include eleven (11) Community Action Agencies, and one (1) non-profit housing agency. Though all are similar in the way they approach their management of the Weatherization Assistance Program, each has the freedom to shape their organization and their energy program in the manner which best meets their needs, as well as the needs of the communities they serve. Through the budget review and approval process as well as ongoing monitoring procedures, DHCD ensures that Subgrantees have adequate technical and administrative staff to administer the DOE WAP.

#### Contractor Labor

All weatherization work in Massachusetts is completed by private sector contractors under contract with Subgrantee agencies. Contractors participating in the DOE WAP respond to an open competitive procurement process. The Subgrantee has the responsibility of reviewing the responses and then using a minimum of three (3) contractors for the work that is needed. The contractors are then awarded work on an equitable basis. While DHCD does not provide certification for private sector contractors used in the WAP, all contractors must demonstrate technical competence and knowledge of typical DOE WAP measures, such as air sealing, attic/sidewall insulation installation, and health and safety protocols before signing a contract with a WAP Subgrantee. Contractors must also demonstrate competency using a blower door apparatus and that their insulation blowing equipment is capable of completing dense-pack sidewall insulation. DHCD technical staff and consultant trainers also provide training on weatherization techniques to private sector contractors working in the program as needed. DHCD also provides contractors with subsidized training at the Green Jobs Academy, an IREC Accredited DOE training center. Contractors must provide verification that they have satisfied all licensing requirements consistent with state regulations (Construction Supervisors License or Insulation Specialty License), have an active Home Improvement Contractor Registration status with the Mass. Office of Consumer Affairs and Business Regulation, maintain current and adequate Liability and Workers' Compensation Insurance policies, received OSHA Job Safety Training, passed an EPA approved Lead-Safe Renovators program, are MA Licensed Lead-Safe Contractors (Massachusetts equivalent of EPA Certified Renovator Firm), and have completed a Lead-Safe Weatherization (LSW) training based on the DOE LSW Curriculum as well as any DHCD required refresher training.

Once a contractor has completed a weatherization job, the Subgrantee must perform a final quality control inspection visit to the home. No contractor shall be paid until all work has been inspected and approved as acceptable by a Subgrantee-employed HEP Certified QC Inspector. All call-backs must be corrected prior to payment being made. If work performed by a contractor is consistently less than acceptable, the Subgrantee has the option of terminating the contract with the contractor and requiring

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the return of any outstanding work. Additionally, the DHCD technical field staff perform frequent quality control visits to homes in each Subgrantee service area on a regular (monthly) basis. If the DHCD staff determines that a contractor is doing work that is not up to WAP standards, the Subgrantee Energy Director and WAP staff will be informed and provided with recommendations or requirements for additional training or termination if problems persist.

#### Subgrantee Implementation

The Subgrantee implementation of the DOE WAP must be in accordance with the State Plan, the DOE WAP contract with DHCD, their approved budget, any guidance that is released by DHCD including DOE/NREL Standard Work Specifications, the Massachusetts Weatherization Field Guide, the Massachusetts WAP Policies and Procedures Manual, and any memoranda that the DHCD releases. Subgrantees are monitored regularly (monthly site visits) to ensure adherence to programmatic requirements.

DHCD staff monitors all monthly reimbursements, relative to the total overall budget by category. Once the maximum contractual reimbursement is disbursed, the State Comptrollers' accounting system is designed to ensure that no additional funds are available to the Subgrantee.

#### V.8.2 Administrative Expenditure Limits

Subgrantees are awarded Administrative funds on a per unit basis in such a manner to make certain the allocation in the Subgrantee Administration is no less than 5% of the total administrative funds available. For FY 2017 that amount is \$375 per unit and results in 5.17% of the available administrative funds allocated to Subgrantees.

Due to the availability of utility leveraged funds, no Massachusetts WAP Subgrantee requires the use of administrative funds in excess of the budgeted amount and none have requested additional funds. Our smallest WAP Subgrantee, Housing Assistance Corporation, budgeted for 33 units (total DOE WAP allocation of \$211,255 including \$12,375 in admin.), reported utility leveraged energy efficiency resources during calendar year 2016 and expects similar utility funding for 2017.

#### V.8.3 Monitoring Activities

The Massachusetts WAP Grantee DHCD will conduct regular technical, programmatic, administrative, and financial monitoring to ensure the program is being implemented by Subgrantees consistent with the requirements of [U.S. DOE Title 10 CFR Part 440, NREL/DOE Standard Work Specifications](#), the [Massachusetts Weatherization Assistance Field Guide SWS Aligned Edition, DOE WPN 2015-4](#), and the Massachusetts WAP Policies and Procedures Manual.

Technical/programmatic monitoring will be completed by DHCD Technical Field staff on each WAP Subgrantee every 4-5 weeks. This visit will include full QCI inspections of work completed and a review of associated client files to ensure compliance with Section 8.13 of the Massachusetts WAP Policies and Procedures Manual (household eligibility, energy audit/inspection procedures, Lead RRP required documentation, work/job order, in-process inspections, contractor(s) invoice(s) and quality control inspections). In addition, in-process inspections of work while WAP contractors are on-site will be completed whenever possible. In process inspections include quality of work review, compliance with energy audit/WAP Priority List requirements, job site safety, Lead RRP, and LSW compliance.

DHCD also completes a full scale annual programmatic/administrative monitoring (Program Assessment) visit for each WAP Subgrantee. This visit includes a review of client files, administrative systems, client selection process and priorities, leveraging activities, contractor procurement, utilization and file maintenance (including required insurance, licensing, Lead RRP certification and LSW training, documented WAP sponsored training, and contractor's signed Debarment statement), technical procedures, (energy audits/adherence to WAP Audit/Priority List requirements, health and safety testing, work orders, contractor invoice, and quality control inspection), re-weatherization unit identification procedure and reporting. The Program Assessments incorporate a review of the WAP Field Monitoring for the year. The Assessments are completed by a combination of one or two of the Technical Field Representatives, the Energy Programs Coordinator and/or the WAP State Program Manager. DHCD conducts an exit conference at the close of each assessment.

Subgrantees are provided a written report with Findings, Concerns, Recommendations, Commendations, and Best Practices.

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Due date for any corrective actions required by the Grantee are noted in the report. Subgrantees are given a period of time, typically three weeks, to respond to the Assessment. DHCD reviews the response to make certain that corrective actions and recommendations are addressed and follows up as needed. Follow-up visits are completed when needed to verify compliance. The WAP Program Assessment Monitoring instrument is attached. DHCD has set up the following tentative monitoring schedule for the annual Program Assessment for each of the WAP Subgrantees:

|                  |         |
|------------------|---------|
| CFC              | June 20 |
| ABCD             | May 22  |
| Action           | May 30  |
| WCAC             | May 23  |
| BCAC             | June 5  |
| Community Action | June 6  |
| CAPIC            | June 13 |
| SPCA             | June 12 |
| GLCAC            | June 26 |
| SMOC             | June 1  |
| HAC              | June 27 |
| QCAP             | June 19 |

DHCD Technical Field Staff typically conduct Subgrantee field visits 4 days per week. Both field staff members are HEP QCI certified. DHCD will complete a full QCI inspection on no less than 10% of the units completed by each Subgrantee during the FY 2017 program year as DHCD has adopted the Independent Auditor/QCI option for administering Quality Control Inspections. While many Subgrantees in Massachusetts have a separate staff person conducting audits and QCIs, there are Subgrantees in the state that are small with limited staff. Thus, DHCD has chosen the Independent Auditor/QCI option assuming that each Subgrantee is not utilizing a separate Auditor and QCI person, even though they might in fact be using separate individuals to perform these job roles.

The field staff have all received extensive training and certification in all aspects of weatherization including:

BPI Home Energy Professional Quality Control Inspector  
BPI Building Analyst Professional and Envelope Specialist (or their previous titles)  
Advanced Blower Door Training/Pressure Diagnostics  
Combustion Safety Training  
Thermal Imaging Training by Snell Infrared, Monroe Infrared  
EPA Lead RRP Certified Renovator/Mass Lead Safe Renovator Supervisor  
DOE Lead Safe Weatherization (LSW)  
OSHA 10 Job Site Safety  
ASHRAE 62.2-2016  
New England Fuel Institute Oil Heat Technician Training  
OSHA Confined Space Training

In addition to the these formal trainings, the staff has regularly attended continuing education opportunities at DOE National and Regional Training Conferences, Home Performance Coalition New England Training Conferences, various trainings offered by manufacturers of combustion testing equipment and heating systems, the Massachusetts Gas Networks Annual Heating System Training, Heat Loss/Heating System Sizing Software training using the TACO Flo Pro software. Staff also has been provided the DOE/NREL Energy Auditor, Crew Member, and Crew Chief curricula for review. In addition, DHCD staff regularly review web-based trainings and videos available on a variety of subjects related to home weatherization, insulation, heating systems, combustion safety and efficiency testing, as well as trade journal articles related to home heating, weatherization, and residential construction and remodeling. DHCD staff also maintains contacts within the various industries involved in home weatherization and home heating and provides WAP Subgrantees with technical and product literature as well as website links.

While much of the field staff responsibilities are technical in nature, they are also well versed in the programmatic aspects of the program. An important part of their responsibilities includes review of client files for compliance in all aspects from client selection through verification of the final quality control inspection and reporting of the work to DHCD.

The Technical Field Staff positions are paid by Grantee Training and Technical Assistance funds and DHCD's LIHEAP-funded heating system repair and replacement program. DHCD views each monitoring visit as an opportunity for identifying Training and Technical Assistance needs as well as to ensure programmatic compliance with regulations and standards. Approximately 55%

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of the Training and Technical Assistance funds retained by DHCD is used for monitoring activities. As a percentage of the total T&TA allocated (to Subgrantees and Training Center) that percentage is approximately 24%.

Each Subgrantee typically receives 10-12 technical/programmatic monitoring visits each year with an average of two sites inspected with a full QCI review during each visit. Subgrantees are sent a WAP Informational Memorandum prior to each month with the scheduled dates for WAP Monitoring Visits detailed for the upcoming month. Technical Field Staff Monitors regularly rotate to different Subgrantees so that each Monitor completes site visits to each Subgrantee at least twice per year.

Each monitoring visit also includes a client file review for compliance with the required documentation consistent with the Client File section of the WAP Policy Manual. Additional Training and Technical Assistance or Monitoring visits are scheduled if problems are identified either during regularly scheduled monitoring visits or through desk reviews of monthly reports. Field staff complete a written report following each monitoring visit which is sent to the Subgrantee. If there are any call backs identified as a result of the monitoring visits, the Subgrantee must provide DHCD with the resolution to the call back. DHCD tracks call backs both by Subgrantee and contractor to assist in identifying problems and potential training opportunities (i.e. if a particular contractor is having a problem with air sealing measures, DHCD will identify and provide appropriate training). Similarly, if DHCD identifies a Subgrantee or a specific Energy Auditor exhibiting a pattern of missed opportunities or recommending inappropriate measures, DHCD will provide additional training. Call backs related to the installations completed by WAP contractors are completed at no cost to the DOE WAP. If additional appropriate work that was not identified by the WAP Subgrantee is needed and is identified by the DHCD field staff, and that unit has been submitted to DOE, no additional DOE funds will be used to correct the deficiencies.

DHCD Technical Field Monitors utilize a tablet-based monitoring form, Weatherization Field Visit Report (attached to the State Plan). The form used by field staff has hyperlinks to the DOE/NREL Standard Work Specification (SWS) related to the installed measure. All monitoring will be conducted to ensure that work is in compliance with the SWS, DOE WAP Energy Audit requirements, and 10 CFR 440 Appendix A.

The Contract Scope of Services between DHCD and Subgrantees provide the following provisions for suspension or termination of the Contract: The Department may terminate or suspend this Contract pursuant to Sections 4 and 5 of the Commonwealth Terms and Conditions. The Department may provide the Contractor with written notice to decrease or cease Contract activity. Effective upon receipt of notice from the Department, or a later date specified therein, the Contractor agrees to decrease, suspend, and/or terminate Contract activity in conformance with the terms of such notice.

The Contract Scope of Services also contains the following provisions related to monitoring, field visits, and inspections:

(E) The Department reserves the right under this Contract to secure its own independent audit of the Contractor's records, if in its sole discretion, the Department determines it is necessary for any reason.

(G) In addition to ongoing monitoring, the Department's staff shall also evaluate the Contractors annually through the "Weatherization Assistance Program Subgrantee Assessment Procedure". Department staff shall use interviews, inspection of client files, site visits and direct observation to identify program strengths and areas of concern so that Contractors can improve their productivity, efficiency, quality, and management capacity.

(H) Following each monitoring visit to the Contractor, the Department shall prepare a written report of findings, a copy of which shall be sent to the Contractor's Executive Director or other authorized representative within 30 days of the visit. The Department's Monitoring Report may contain observations, evaluations, suggestions and/or specific direction for corrective action on the part of the Contractor. In the event that specific corrective action is provided, the Contractor shall have 30 days from the receipt of the directions to comply, or 10 days to contact the Department in the event that the Contractor does not agree with the findings or direction of the Department's report. In the case of a dispute, the Department and the Contractor shall meet at the earliest convenience to resolve the specific disputed issues. Failure of the Contractor to reply to or comply with specific directions provided by the Department shall be treated as grounds for termination or suspension under Section 4 of the Commonwealth Terms and Conditions and herein.

(I) The Department may also determine, upon the basis of its own monitoring reports, Contractor reporting, and observed Contractor activity, that a comprehensive review of the Contractor's operation of WAP is warranted. Such review shall result in a written report, with findings presented, and corrective action specifically directed if applicable. The Contractor agrees to cooperate with such program review activities. Failure to comply with specific directions shall be treated as grounds for termination or suspension under Section 4 of the Commonwealth Terms and Conditions and herein.

(J) The Department or its authorized representative may conduct an exit interview at the end of each inspection, review, or audit.

(N) The Contractor is required to comply with Section 7 of the Commonwealth Terms and Conditions regarding the retention of records and supporting documentation. The Contractor shall make all such books, records, reports, and compilations of data

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available to an auditor or other representative authorized by the Department (including without limitation, fiscal monitors or auditors). The Contractor shall ensure the cooperation of its employees and Board members in any review, audit, or inspection conducted by the Department, its authorized representatives, representatives of the Commonwealth of Massachusetts, the U.S. DOE, and the Comptroller General of the United States, and will provide assistance in obtaining information maintained by the Contractor relevant to the completion of the audit of expenditures made pursuant to this Contract. The Contractor must give auditors access to personnel, accounts, books, records, supporting documentation and other information as needed for the auditors to perform the required audit, pursuant to the OMB Super Circular §200.508(d).

(U) The Contractor agrees to inform and/or provide the Department with notice of any communication and/or correspondence originating from U.S. DOE or their representatives regarding the WAP.

(V) Within 5 business days of receipt, the Contractor shall notify the Department and provide the Department with copies of any and all exception reports and written communications of an audit or review of the Contractor and any written final reports of such audits or reviews that the Contractor receives during the Contract term from DOE, the Federal and/or State Office of the Inspector General (OIG), and the Office of the State Auditor. Such reports or communications may be provided electronically

Financial Monitoring is completed annually at each WAP Subgrantee by the Division of Community Services' Financial and Compliance Unit. Fiscal reviews address Subgrantee financial management procedures, and are conducted at the Subgrantee site. The DHCD/DCS Finance and Compliance Unit reviews accounting records for compliance with required record keeping, procurement, and financial management procedures. While the reviews are conducted annually, more frequent visits will be scheduled if the fiscal situation at a particular Subgrantee(s) warrants. Written reports, in support of the exit interview, are mailed to the Subgrantee within two weeks of the visit. Subgrantees must respond in writing within 30 days of receipt of the report.

DHCD fiscal staff, pursuant to 200.501 of the OMB Super Circular, requires annual submission of a bound hard copy of the Subgrantee's single audit and the audit is reviewed by fiscal staff for compliance issues. The audit is further reviewed during the Subgrantee's annual fiscal monitoring visit. DHCD Internal Controls Guide requires; "The Finance Director will review the audit findings in consultation with program and fiscal staff, and issue a management decision letter, within six (6) months to clearly state whether the audit findings are sustained or cleared. If audit reports have not been received by a Grantee, and if there is not a DHCD approved extension, payment requests are to be held."

The following is a tentative Fiscal Field Monitoring Schedule:

|                  |            |
|------------------|------------|
| ABCD             | 4/20/2016  |
| Action           | 6/15/2016  |
| BCAC             | 3/18/2016  |
| CAPIC            | 11/20/2016 |
| CFC              | 7/17/2016  |
| Community Action | 12/10/2016 |
| GLCAC            | 10/8/2016  |
| HAC              | 8/28/2016  |
| QCAP             | 7/27/2016  |
| SPCA             | 10/20/2016 |
| SMOC             | 1/27/2016  |
| WCAC             | 7/20/2016  |

DHCD completes Desk Reviews of Subgrantees each month. Programmatic Building Weatherization Reports (BWRs) are submitted for each unit weatherized. BWRs contain information about energy efficiency, incidental repairs, and health and safety measures completed as well as all related costs on each unit. All BWRs are reviewed to make certain that all expenditure data is within the allowable parameters and that the efficiency improvements are appropriate. Subgrantees are contacted with questions as needed and corrections made as required. DHCD identifies if there are any patterns of unusual activities such as many units with high repair costs or potentially skipped priority list measures. Reported units are also identified for potential scheduled site visits during the desk review process.

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

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DHCD considers Training and Technical Assistance to be the core component of administering a technically sound Weatherization Assistance Program and views all interactions with WAP Subgrantees and weatherization contractors as an opportunity to assess and improve the operations of the Program.

DHCD's Training and Technical Assistance (T&TA) activities are designed to maximize energy savings, minimize production costs, improve program management, improve the technical skills of WAP auditors/inspectors and private sector contractors, ensure the health and safety of WAP clients and workers, and reduce the potential for waste, fraud and abuse in the Program. DHCD also strongly believes in the importance of continuing education and improvement in all areas of the Program, technical and management for the Grantee, and Subgrantee and installation contractors. DHCD uses our monitoring as well as any-recommendations from the Massachusetts Office of the Inspector General (MA OIG), and other work quality issues and training requirements identified on the WAPTA website to identify areas of potential weakness, how they relate to our operation of the WAP and what DHCD needs to do to continually improve the quality of services provided and prevent complacency.

DHCD tracks Subgrantee technical staff training and certifications in a spreadsheet that is regularly updated. Training and certification information as well as tracking the results of monitoring visits are used to assist DHCD in identifying and planning training needs and ongoing certifications requirements.

Subgrantees are responsible for making certain that contractors working in the DOE WAP have the necessary training and credentials including required levels of Liability and Workers' Compensation Insurance, State Construction Supervisor License or Insulation Specialty, MA Home Improvement Contractor Registration, MA Lead RRP License, Lead Safe Weatherization training for staff, OSHA 10 Job Site Safety, and OSHA Confined Space. All information must be maintained in a contractor file that is reviewed at least annually by DHCD staff.

Massachusetts' training plan will follow the Tier 1 and Tier 2 training categories as outlined in the WPN 15-04 "Quality Work Plan", Section 4 and as required, will meet the National Renewable Energy Laboratory (NREL) Job Task Analysis (JTA) for which the worker is employed. Subgrantees are encouraged to re-certify their Auditors and Quality Control Inspectors in accordance with this training plan, as needed, and at least 6 months prior to the expiration of the individuals' certification date to ensure an adequate supply of QCIs as well as all other occupational specialties requiring certification.

The major objective of Training and Technical Assistance is to provide Subgrantees with the information and training required to administer and operate in compliance with DOE and Massachusetts WAP rules and regulations. To satisfy the inspection requirement of WPN 15-4, all Subgrantees and subcontract agencies are required to have at least one QCI certified person on staff or if necessary may contract with an independent QCI contractor or use the QCI staff resources of another agency on a temporary basis.

#### Tier 1 Training

Comprehensive, occupation-specific training which follows a curriculum aligned with the JTA for that occupation. Tier 1 training must be administered by, or in cooperation with, a training program that is accredited by a DOE-approved accreditation organization (e.g. Interstate Renewable Energy Council (IREC) accredited) for the JTA being taught.

#### Tier 1 - Training Providers

Tier 1 IREC accredited training providers are located throughout the country and Tier 1 trainings are provided throughout the year and dependent upon the Training Providers' schedule. Subgrantees are reminded that any out-of-state training activities must be approved in advance by DHCD.

The following WAP training centers are IREC accredited for Tier 1 training:

Green Jobs Academy (subsidiary of WAP Subgrantee South Middlesex Opportunity Council)  
7 Bishop Street, Framingham, MA 01702  
(508) 626-7150  
Martin Luther King Jr. Opportunity Center  
237 Chandler Street  
Worcester, MA 01609  
<http://www.smoc.org/green-jobs-academy.php>

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New York State Weatherization Director's Association (NYSWDA) Training Center  
Syracuse Training Center  
5869 Fisher Road, East Syracuse NY 13057  
<http://www.nyswda.org/training/training-center/syracuse>

Community Housing Partners (CHP)  
CHP Energy Solutions Training Center  
550 Industrial Drive, Christiansburg, VA, USA 24073  
<https://www.communityhousingpartners.org/276/train.html>

The following non-WAP related training centers are IREC accredited:

Greenfield Community College  
Greenfield Community College Science Dept. 1 College Drive  
Greenfield, MA 1301  
[www.gcc.mass.edu/](http://www.gcc.mass.edu/) (H.E.P. Energy Auditor only)

Institute of Environmental Management & Technology  
10 Long Hill Avenue  
Shelton, CT 6484  
UNITED STATES  
[www.emc1.com/iemt/](http://www.emc1.com/iemt/)

Additional IREC accredited training centers are available using the dropdown menu here:  
<http://www.irecusa.org/credentialing/credential-holders/>

Tier 1 training courses include:

Home Energy Professional – Crew Leader  
Home Energy Professional – Energy Auditor  
Home Energy Professional – Retrofit Installer  
Home Energy Professional – Quality Control Inspector

As a subsidiary of the MA Subgrantee South Middlesex Opportunity Council (SMOC), the Green Jobs Academy (GJA) provides T&TA funding to facilitate training for WAP staff and contractors working in the WAP.

The GJA is IREC accredited as a training facility for Quality Control Inspector, Retrofit Installer Technician, and Crew Leader and is applying for accreditation for Energy Auditor. GJA offers BPI continuing education credit for attendance as well as continuing education credit for Massachusetts' Department of Public Safety licensing requirements (i.e. Construction Supervisor, Insulation Specialty License, etc.). The GJA is a certified BPI Training and Testing Center. All training is aligned with the DOE/NREL Job Task Analysis (JTA) and will be conducted by the Green Jobs Academy to ensure that the trainings meet the Tier 1 training requirements of the DOE Quality Work Plan. Certificates of completion will be awarded for all classroom Tier 1 and Tier 2 trainings.

Tier 1 training will be required of all WAP Subgrantee technical staff completing audits and inspections. Training will be completed as modules using curriculum based on the NREL Job Task Analysis (JTA). Subgrantee Energy Auditors and Inspectors will be required to attend at least one module each quarter over the next program year. DHCD will require additional training if WAP monitoring indicates that the Auditor/Inspector needs to improve his/her knowledge and/or skills. DHCD will track training completed in the training/credential spreadsheet referenced above. Failure to attend training as required will result in the Auditor/Inspector being prohibited from

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completing WAP audits and inspections until the training requirements are satisfied.

**Energy Auditor/Quality Control Inspector Training:**

All current WAP Auditors and Quality Control Inspectors will be required to attend an auditor training module quarterly to maintain DOE WAP certification. GJA will provide both field and classroom instruction that aligns with NREL JTA/KSA for the Energy Auditor classification. Different modules will be scheduled each month at the GJA. Curriculum will be based on the JTAs and will be offered in modules. Core modules will include, but not limited to:

Weatherization Basics and Home Assessment Procedure

Building Diagnostics/Blower Door Basics

Infrared Thermography

Heating System Diagnostics and Testing

Health and Safety Evaluation and Testing

Combustion Safety/CAZ Testing

ASHRAE 62.2-2016

Advanced Blower Door/Zonal Pressure Diagnostics

Manufactured Housing Evaluation

Energy Auditor Certification Requirements:

DHCD requires that Subgrantee Energy Auditors and Quality Control Inspectors undergo a training program to ensure that they are technically competent. The program is tailored to the needs of the individual and varies depending on the background of the individual. DHCD has a certification process in place that Auditors must complete within six months of being hired and before they conduct any DOE WAP audits on their own. The two-part process includes a field test that involves conducting two field audits. The candidate must demonstrate the ability to set-up and use a blower door apparatus to conduct a single point CFM @ 50 test and to identify the air sealing needs of the unit. The Auditor must complete an inspection and evaluation of the heating system and all combustion appliances for efficiency, safety, CO testing, and proper draft as well as demonstrate the ability to conduct a combustion appliance zone (CAZ) test. All other health and safety concerns (asbestos, lead issues, moisture/mold concerns, and VOCs) must be identified and addressed. The unit must be evaluated for ASHRAE 62.2-2016 requirements. Other requirements include: evaluation of appropriate insulation needs of the home, defining the thermal and pressure boundary, and accurately measuring and determining the square footage of areas to be insulated as well as demonstrating appropriate client education abilities. The candidate must complete the initial inspection and recommended measures in the Subgrantee audit package and submit it to DHCD for review. WAP Subgrantee Energy Auditors/Inspectors are required to be certified using DHCD's MA WAP specific field test and a 100 question written test. Auditors/Inspectors are also required to complete the MA Department of Labor Standards, Lead RRP Certified Renovator, and DOE Lead Safe Weatherization training. They are also required to take advantage of continuing education opportunities such as Advanced Blower Door/Pressure Diagnostics, Combustion Safety, and training involving heating system sizing, installation, and operation.

In 2010, DHCD began the process of requiring BPI Building Analyst Professional training/certification and funded the training and certification. However, when DOE/NREL began the Job Task Analysis and professional certification for the four (4) job classifications and Home Energy Professional Certifications (Energy Auditor, Quality Control Inspector, Crew Member, and Crew Chief), DHCD viewed those classifications as more relevant to the WAP and held off on the requirement for BPI certification. Subgrantees were encouraged to continue the process for those interested in pursuing the BPI certification (or maintaining their existing certification). DHCD has changed the future certification focus to the DOE/NREL protocols. Currently, about one-half of the Energy Auditors are BPI Building Analyst Professional certified as well as several in the BPI Envelope Professional and Heating System Professional categories. Those staff members who have received BPI certification are encouraged to maintain that certification pending DOE's move to the Home Energy Professional certification requirements.

**Quality Control Inspector Training and Certification**

**QCI Certification Training:**

During the FY 2017 program year, DHCD will continue the process of training and certification for Quality Control Inspectors consistent with DOE's Quality Work Plan guidance. DHCD will provide WAP Subgrantees and the Green Jobs Academy with adequate T&TA funding to provide QCI certification training to as many technical staff members as possible that exhibit the ability to make it through the training and certification process.

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To ensure that adequate trained and certified QCI staff are available, GJA has scheduled quarterly QCI trainings during the 2017 Program Year. Any Subgrantee staff planning to attend must demonstrate that he/she has adequate background and training to satisfy the prerequisites to take the examination. Subgrantees are free to utilize any accredited training and testing entity to ensure that they have an adequate number of certified QCI staff. If there are an insufficient number of Subgrantee candidates for the GJA to hold a class, DHCD recommends that the Subgrantee schedule the training at a larger DOE WAP training facility such as the NYSWDA facility in New York that attracts candidates from a larger region. The certification tests may be completed with any certified training center or with GJA.

Currently, each WAP Subgrantee and subcontract agency have at least one QCI certified individual. DHCD recognizes the need and value of having highly qualified and certified staff and will assist Subgrantees in identifying candidates for QCI training and certification. DHCD will not limit the number of qualified Subgrantee WAP staff within the network that are allowed to go through the process. DHCD will support all qualified technical staff that have demonstrated a reasonable likelihood of success. DHCD also encourages and requires certified staff to earn CEUs to maintain their certification.

**Tier 2 Training**

Single-issue, short-term training to address acute deficiencies typically identified during field monitoring such as dense packing, crawlspace, ASHRAE, etc. Conference trainings are included in this category.

**Tier 2 - Training Providers**

In addition to IREC accredited Tier 1 training providers, several non-IREC accredited training providers are located throughout the state; several Massachusetts Community and Technical Colleges have energy efficiency related curriculum; manufacturers and local supply houses offer training on test equipment and heating system operation/sizing; several online entities offer online training. Tier 2 training courses are provided throughout the year and dependent upon the individual training provider's schedule. Subgrantees are reminded that any out-of-state training activities must be approved in advance by DHCD.

Tier 2 training can be provided by a variety of entities including IREC accredited training centers and independent training companies that deal with specific subjects such as Lead RRP and OSHA regulations. Tier 2 training can also include training designed to enhance staff computer literacy as it relates to their job within the WAP.

**Tier 2 training courses including, but not limited to:**

**ASHRAE 62.2 (2016) - Residential Ventilation**  
**Audit Assessment**  
**Blower Door Testing**  
**Duct Leakage Testing**  
**Building Science**  
**CAZ Testing**  
**Zonal Pressure Diagnostics**  
**Client Education**  
**Crew Leader**  
**Dense Pack Insulation**  
**Diagnostics - Energy Auditor Testing Equipment**  
**HVAC Fundamentals**  
**Infrared Thermography**  
**Lead-Safe Weatherization**  
**Manufactured Housing - Fundamentals**  
**NEAT/MHEA**  
**OSHA 10 - Construction**  
**Lead RRP Renovator - Initial Course**  
**Retrofit Installer Technician**  
**Weatherization Management**

Towards the end of PY 2016, DHCD began coordinating monthly WAP technical trainings on a variety of, but not limited to, the above referenced Tier 2 topics. These trainings will continue in PY 2017. These trainings are led by DHCD technical staff and Green Jobs

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**Academy training staff attend/participate in these monthly offerings as well. The purpose of these trainings is to hold trainings more regularly on topics where DHCD Technical Field Staff feel that trainings would be helpful to Subgrantee field staff and/or improve Subgrantee field work quality.**

The GJA has scheduled the following Tier 2 trainings to be held on a regular basis:

**DOE LSW Training:**

GJA has scheduled monthly DOE LSW training. Training is required for any contractor and their crews seeking to work in the WAP or any new Subgrantee technical staff member. Additional LSW training will be scheduled as demand dictates. Contractors and WAP technical staff must attend an LSW training prior to working on-site on DOE WAP jobs.

**OSHA Related Training:**

OSHA 10 stand-alone completed as needed and in conjunction with installer trainings.

OSHA 30 training as needed.

GJA provides Confined Space training on demand as needed (required of all Subgrantee technical staff).

Private sector contractors and their crews working in the WAP will be required to attend regular training.

GJA and DHCD have experienced success in providing Tier 2 training on WAP job sites while contractors are completing work. While technically these trainings are considered Tier 2, they will be modules of a group of Tier 1 level training that are part of a full Crew Leader and Retrofit Technician Installer training for crew members.

The on-site model, with a GJA trainer and DHCD technical staff at the job site, has proved very successful based on past experiences. Training is completed under real life conditions which enables the trainer and DHCD staff to observe the crew's tools and equipment and their testing and installation procedures. The trainers can then offer suggestions for improving installation techniques to improve work efficiency and effectiveness while reinforcing the SWS installation requirements. Local agency technical staff will be required to attend and participate. DHCD and GJA plan to conduct these trainings rotating local Subgrantees and contractors as scheduling permits.

While crews and crew chiefs have completed OSHA 10 as required, job site safety will also be addressed during the trainings. Lead RRP licensing and Lead Safe Weatherization (LSW) training are required of contractors new to the Program and refresher trainings will be offered and required when needed. Trainings will be conducted in several different formats including using the GJA facility and in small groups involving contractors that work for a Subgrantee with the WAP Coordinator, Auditor/Inspectors, and DHCD.

GJA provides the following full Tier 1 training for contractors:

**Crew Leader Training:**

GJA currently provides monthly crew lead training available to all contractors participating in the WAP; these workshops have typically been full over the past two years. Crew leaders will be required to attend if monitoring results indicate the need. Additional crew leader training will be scheduled as the need is identified.

**Retrofit Technician Installer Training:**

GJA will schedule Retrofit Technician Installer trainings during the 2017 Program Year as needed. Additional training will be scheduled as needed.

DHCD will continue to conduct training in the use of the National Energy Audit Tool (NEAT) and Manufactured Housing Energy Audit (MHEA) for WAP Subgrantee staff as needed and requested after July 1, 2017.

DHCD reviews Subgrantee Building Weatherization Reports (BWRs) and unit production each month as reports are submitted. BWRs are reviewed for appropriate high priority weatherization measures and expenditures. Production is compared to goal for the period. The BWR review is used on a larger scale to determine that a Subgrantee (or an individual Energy Auditor at that Subgrantee) is completing the most cost-effective measures that will result in the greatest energy savings. If any review determines that the most cost-effective measures are not being completed, DHCD will identify the need for additional monitoring and training. DHCD also compares the measures completed and levels of production with other Subgrantees. Underperforming Subgrantees are identified and addition monitoring or training and technical assistance is provided depending on the need.

Client education is delivered in the home as part of the initial energy audit and during the quality control inspection. The information is customized to the needs of the home and interest and ability of the residents. All

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WAP Energy Auditor training includes a client education component so that the Auditor understands the following: the importance of communicating with residents of the home what is involved in the weatherization process and what to expect next; how their interaction with installed measures may affect the effectiveness of the measure; what they can do to save energy; and identify and make the residents aware of potential health and safety issues and related air quality concerns. Clients are provided with brochures concerning moisture and mold issues, lead paint safety, and any other information that may be appropriate for the specific needs of the home. In addition to the DOE WAP, Massachusetts' Subgrantees administer utility-funded Appliance Management Programs (AMPs) that provide residents with information on electric base-load usage and measures that they may take to save electric energy. In many instances, this service is delivered at the same time as the WAP audit. DHCD on-site monitoring visits to a client's home provide an informal means of observing the Energy Auditor's interaction with the residents of the home and the client education delivery resulting in possible recommendations for additional training if needed. DHCD and the WAP Network continue to work with the Best Practices group (a subsidiary of LEAN) to maintain up-to-date client education material that is relevant to both the DOE WAP and the utility-funded programs in Massachusetts.

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

The primary energy-related crisis to face low-income households in Massachusetts is the breakdown or inefficiency of their heating system. DHCD has a heating system repair and replacement program in place known as the Heating Emergency Assistance Retrofit Task Weatherization Assistance Program (HEARTWAP) to help resolve this problem. This program is funded by LIHEAP Conservation Set-Aside funds. During the heating season (October 1-April 30), the program serves primarily as an emergency intervention service to provide assistance to low-income clients having problems with the operation of their primary heating system. Eligible households call the local administering agencies and notify HEARTWAP staff when they are having a problem. Heating companies, under contract with the local agency, provide services necessary to keep the heating system operating efficiently and safely. The client's dealer of record is utilized whenever possible. Provisions are in place for clients to contact their dealer directly if the emergency occurs during evening, holiday, or weekend hours. During non-heating season (May 1-September 30), the HEARTWAP provides heating system maintenance and efficiency upgrade services subject to the availability of funds. HEARTWAP services include the following: emergency repairs, clean and tune, burner replacements, entire system replacements, oil tank replacements, oil line replacements, chimney liners (only as needed for heating system services) and asbestos abatement (only as needed for heating system services). The HEARTWAP has been refined by DHCD staff over the past years of operation so that it is capable of dealing with most heating emergencies. As a result of the HEARTWAP and the extensive availability of utility efficiency program funds in Massachusetts, DHCD does not foresee the need to use DOE funds for heating system issues.

In the event of a Federal or State declared disaster, Subgrantees may use DOE WAP funds to the extent that services are in support of typical eligible weatherization work. Re-prioritization of eligible households that reside in the area is allowed provided that they meet one of the priorities identified in 10 CFR 440.16(b). The allowable expenditures are limited to allowable energy conservation, incidental repairs consistent with 10 CFR 440.18(d), and health and safety measures (10 CFR 440.18(d)(15) in this State Plan. Prior to weatherization expenditures on a unit under this provision, the Subgrantee must determine that all insurance claims or other forms of compensation resulting from the damage incurred have been exhausted for the rehabilitation.

In the event of a Federal or State declared disaster, Subgrantees may return to a unit that has been previously weatherized. "If such dwelling unit has been damaged by fire, flood, or act of God and repair of the damage to weatherization materials is not paid for by insurance;" to re-weatherize consistent with 10 CFR 440.18(f)(2)(ii). The unit must be salvageable as determined by the local jurisdiction having oversight authority.