

# **Weatherization Assistance Program**

**Annual Base Grant**

**U.S. Department of Energy**

**2010-2011**



**Grant Amendment Application**

**by**

**Department of Natural Resources and Environmental Control**

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### STATE PLAN/MASTER FILE WORKSHEET

Identification Number: EE0000154, State: DE, Program Year: 2010

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

#### III.1 Eligible Population

##### III.1.1 General Description

###### Definition of income used to determine eligibility:

The State of Delaware defines eligibility for weatherization assistance as follows: A dwelling shall be eligible for weatherization assistance if it is occupied by a family whose income is at or below 200% of poverty level as determined and established by the Director of the Office of Management and Budget (OMB), and as modified by the American Reinvestment and Recovery Act Section 407 (440.22(a)1). "Categorically eligible" Dwelling Units are defined as follows:

1. A dwelling unit which contains a member who has received cash assistance payments under Title IV or XVI of the Social Security, or applicable State or local law, at any time during the 12 month period preceding the determination of eligibility for weatherization assistance is "categorically eligible" to receive weatherization services (440.22(a)2).
2. The State elects to make dwelling units eligible under the Low-Income Home Energy Assistance Act of 1981 (LIHEAP) "categorically eligible" for weatherization assistance (440.22(a)3). Delaware's eligibility for LIHEAP is determined at 200% of the OMB poverty income guidelines.
3. Native Americans are served in the general population and will be eligible to receive benefits equivalent to assistance provided to other low-income persons within the State.

There are two portals for application to the weatherization program:

1. LIHEAP clients are "categorically eligible." Therefore, all applications taken for the LIHEAP program will include an option that clients may select to include weatherization services. A copy of this application must be included in the client's weatherization file.
2. Clients may also apply for weatherization services directly through the DHSS State Service Centers and the subgrantees. In this case, the same LIHEAP application will be filled out and the required eligibility documentation will be collected at the time of intake and included in the client file to verify eligibility.

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

DNREC requires that all subgrantees maintain client files that document eligibility. Client files are available to DNREC for program evaluation and monitoring purposes. Files containing applications taken by the State Service Centers and the subgrantees must include the corresponding income documentation. LIHEAP Fuel Assistance clients that are "categorically eligible" only need to have a scanned copy of the application from the LIHEAP Fuel Assistance Program indicating they are "categorically eligible." State staff monitor files and check application dates to ensure that clients received services during the period of eligibility within one year of their application. The subgrantees are responsible for cross-checking all eligible households with the updated database of units that have been weatherized after September 30, 1994. DNREC and the subgrantees collaborate to maintain the database of previously weatherized units. Each agency is required to verify that the clients receiving weatherization services are income eligible and were income eligible during the time in which they received weatherization services. The agency is required to document services provided to the client and all costs associated with the completion of those services.

To ensure that dwelling units are in fact eligible for weatherization services, subgrantees receive written procedures, policy updates, and information for ensuring compliance with 10 CFR 440.22 Eligible Dwelling Units. All eligibility documentation will be scanned and uploaded into a new web-based database that is scheduled to be developed and launched in late 2010 for all future participants.

Definition of children: Below age 18

Recommend tribal organization(s) be treated as local applicant? No

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### STATE PLAN/MASTER FILE WORKSHEET (continued)

Identification Number: EE0000154, State: DE, Program Year: 2010

**If YES, Recommendation: If NO, statement that assistance to low-income tribe members and other low-income persons is equal:**

In accordance with 440.16(f) the State requires that low-income members of an Indian tribe receive benefits equivalent to the assistance provided to other low-income persons within the state.

#### III.1.2 Selection of Areas to Be Served

Subgrantee selection was based on comment received at a public hearing pursuant to 10CFR 440.14 (a), and appropriate findings as outlined in 10 CFR 440.15 for prospective subgrantees.

#### III.1.3 Priorities

The State of Delaware's waiting list is comprised of eligible clients who have applied for the Low-Income Home Energy Assistance Program (LIHEAP), as well as the other eligibility opportunities previously outlined. The State of Delaware waiting list is prioritized for families to receive weatherization services and to maximize energy saved. Prioritized categories are the elderly and/or disabled, and households with children. DNREC's goal is to ensure that priority is given to high residential energy users and to households with high energy burdens and is developing systems to facilitate the collection of data to allow for this additional priority in the near future. DNREC coordinates a single database of eligible clients and a single, transparent, and objective process is used for prioritizing the client priority list. The subgrantees are responsible for maintaining client files. DNREC closely monitors the subgrantees for adherence to the client priority list. Additionally, DNREC monitors for compliance of intake procedures and client eligibility. DOE requires that priority be given to elderly and/or disabled. In addition, DOE allows States to prioritize households with children. Owner occupied and renter occupied dwelling units have equal priority.

#### III.2 Climatic Conditions

Delaware's climatic data is based on a formula calculation found in the Statistical Abstract of the United States, published by the U.S. Bureau of the Census. The average number of annual heating and cooling degree-days in the State of Delaware is 4,937 and 1,046 respectively, which indicates relatively mild climatic conditions. There are only slight variations in the number of heating and cooling degree-days among the three counties of the State.

#### III.3 Weatherization Work

##### III.3.1 Type of Work to Be Done

DNREC ensures homes weatherized in Delaware receive the highest quality of work to maximize energy savings and long-term efficiency. The Delaware Weatherization Program accomplishes this by maintaining a well-trained staff to monitor work completed, as well as providing trainings for all weatherization staff, contractors, and their employees. To ensure that procedures are being properly applied, subgrantees receive administrative and technical training, along with field visits and enhanced training at the field site. State staff, subgrantees, and contractors are trained to strictly adhere to the priority list and the State Field Guide.

To assist staff in accomplishing their work, DNREC and the subgrantees use up-to-date equipment such as new blower doors, digital gauges, and carbon monoxide detectors for their State and local staff. Specific weatherization measures are tailored to each housing type using DOE-approved computerized energy audits for site-built and mobile home units. Homes being weatherized, first receive extensive testing of combustion appliances to ensure family health and safety. Work is then assigned to the unit based on the specific recommendations from a rigorous energy audit performed on the unit. The subgrantees select contractors to complete the weatherization work based on the energy audit recommendations (which in turn are based on cost-effectiveness tests).

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### STATE PLAN/MASTER FILE WORKSHEET (continued)

Identification Number: EE0000154, State: DE, Program Year: 2010

Typical work completed on site-built homes include: testing for health and safety and for general heat waste, a rigorous energy audit, a final inspection to ensure that the work is of the highest quality, and client education, which plays a large role throughout the entire weatherization process. The following outlines some of the measures and testing with the types of work mentioned above. Health and Safety testing and measures include: conducting a visual test of the exterior and interior; installing smoke alarms and carbon monoxide (CO) detectors; and conducting a worst case CAZ test. General heat waste testing and monitoring may include: duct sealing (as directed by blower door and pressure diagnostics); insulating ducts, closed floor cavities, open knee wall cavities, and open floor ceilings in unconditioned spaces; insulating open attic ceilings to R38; insulating floor cavities and sill boot areas in conditioned basements; water heater and furnace system treatments and tune-ups, lighting and base load measures (limit of \$50 in materials per home); refrigerator replacement (if situation meets requirements of the Delaware Field Guide); and other necessary weatherization materials or repairs (limited to \$400 total per home and only with the approval of the subgrantee). Work related to the energy audit may include: inspecting the home exterior and interior to determine the condition of the home for weatherization; testing heating systems; inspecting venting systems; evaluating efficiency; measuring heat rise; inspecting the home interior for health and safety, mold and moisture problems, large air leaks, and insulation levels; evaluating base load levels, such as measuring hot water temperature, counting incandescent lights, and evaluating shower flow; and measuring air leakage by conducting pressure pan tests and need for blower door at CFM 50 and recording readings and evaluating duct. A final inspection is completed for every unit in the Delaware Weatherization Assistance Program for more information about the final audit see below for more details (Section III.3.3). Lastly, client education is conducted throughout the weatherization process. Client education includes: providing information about the weatherization process and about what work is being done, the short- and long-term benefits of the work, about the estimated cost savings of the weatherization measures, about what is and what is not a qualified expense in the weatherization program, and about behavior change opportunities for residents to reduce their energy bills.

While typical work on a mobile home is similar in many respects to the site-built units there are several differences that are important to note. The process for Health and safety testing and measures is the same as site-built homes. The mobile home energy audit and final inspection will follow the same process but with specific procedures for mobile homes. Client education is conducted throughout the weatherization process and is the same as with site-built homes. When testing for general heat waste many of the testing practices are similar but some differences include: insulating floor systems (belly blow); roof insulation (when appropriate); replacing interior storm windows to single pane glass primary primers or jalousie units (when appropriate); and replacement of deteriorates primary door units (when appropriate).

DNREC allows for the replacement of incandescent bulbs with compact fluorescent (CFL) bulbs, if the lights are replaced in areas where the lights are left on for at least three hours a day. The projected 75% savings in electricity justify the cost of the CFL bulbs. Residents are educated on about the energy savings with the CFL bulbs. Also, shower heads and aerators can be replaced along with providing client education. These low cost measures are limited to \$50 in materials per home. Incidental repairs are performed in accordance with DOE guidelines, and prior approval from the subgrantees for material and labor costs over \$400.

#### III.3.2 Energy Audit Procedures

DNREC is currently finalizing new energy audit and final inspection procedures. In order to help simplify and create consistency throughout the entire weatherization process, Delaware will start to use a computerized energy audit system (NEAT and MHEA). The computerized system increases documentation, standardization, quality control, and objectivity in the program. The new audit and final inspection procedures will be approved by DOE prior to implementation, and the new audits will be included in the training of all staff and participants.

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### STATE PLAN/MASTER FILE WORKSHEET (continued)

Identification Number: EE0000154, State: DE, Program Year: 2010

<u>Unit Types</u>	<u>Audit Procedures and Dates Most Recently Approved by DOE</u>
Single-family	NEAT - February 24, 2004
Single-family	NEAT - February 24, 2004
Multi-family	N/A
Multi-family	N/A
Mobile Home	MHEA - February 24, 2004
Mobile Home	MHEA - February 24, 2004

#### III.3.3 Final Inspection

Each subgrantee is required to complete a final inspection of each unit weatherized. Final inspections are conducted by agency auditors that are BPI certified and have completed the required State-sponsored auditor courses. The auditors must use State-approved procedures for energy audits and final inspections. Final inspections evaluate the work completed by the contractors to ensure that: a proper energy audit was completed; the measures recommended were contracted for; the work charged for was completed; and that all work was performed according to quality standards in the field. Additionally, the final inspection ensures that all health and safety issues were addressed in a manner which protects the client. Final Inspections include: post blower door readings at CFM 50; health and safety checks including Worst Case CAZ; checks of accuracy of measured charged against measures installed; and evaluations of the appropriateness of all work completed, including insulation, air sealing, client education, duct insulation, pressure differentials, and costs. A dwelling unit may not be reported as completed until a final inspection has been performed and it has been certified that the work is high quality, all materials have been properly installed, and approved procedures have been followed. Standardized forms are used to document the results of the final inspection, and are recorded and maintained in the client file. Only completed dwelling units with successful final inspections are reimbursed by the State and DOE. Sub-contractors to the subgrantees are not paid until the unit passes final inspection.

#### III.3.4 Assessment of Effectiveness

DNREC implements several levels of oversight to ensure the effectiveness and quality of the program. The final inspections are completed by a different auditor than did the energy audit. This enables the final inspector to perform quality control assessments on both the work done on the unit as well as the energy audit itself. The findings from the final inspections are included in an ongoing evaluation of quality of the sub-contractors that feed directly into the procurement and selection process. Contractors found to have sub-quality work do not continue in the program. High quality contractors are rewarded with extra jobs, the goal being to create specialized experts in weatherization.

The next level of oversight comes from the quality assurance inspections performed by the DNREC staff. The quality assurance inspections assess all the elements as the final inspectors, as well as detailed inspections of the energy audit itself. The quality assurance inspections also include detailed review of the full documentation of the client file, the procedures followed by the subgrantee, the procurement, the documentation, and the invoicing. DNREC staff performs quality assurance inspection on 20% of completed units and 10% of units in progress to ensure that policies and procedures are followed at the work sites. This added quality control step ensures that previous problems of recoding and paying for incomplete units do not happen again. For more details on monitoring the subgrantees please see Section III.6.3.

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### STATE PLAN/MASTER FILE WORKSHEET (continued)

Identification Number: EE0000154, State: DE, Program Year: 2010

#### III.4 Health and Safety

DNREC has prepared a Health and Safety Plan for the Weatherization Program in accordance with DOE program regulations and guidance. Delaware's Health and Safety Plan is attached. The State recognizes that the primary goal of the Weatherization Assistance Program is energy efficiency and will work to ensure that this goal is met. Furthermore, the State will eliminate the cost of Health and Safety from the average-cost-per home and will include this as a separate category. Sub-grantees will be allowed to use up to ten percent (10%) of their budget for Health and Safety.

##### Lead Paint Hazard

Subgrantees will be trained on lead-based paint risk and associated issues. DNREC will require that the sub-grantees have Pollution Occurrence Insurance (POI) and will include this along with the liability insurance as a separate category. Subgrantees must require sub-contractors comply with the Renovation, Repair and Painting (RRP) rule requiring that certain types of work be conducted by an EPA Certified Renovator Firm. Where required under the regulation, the firm must assign a Certified Renovator (CR) for weatherization work in target housing with the responsibility to train non-certified workers and conduct lead swab testing in appropriate areas. The CR must also oversee work practices to ensure the use of lead safe work practices including proper dust barriers, dust minimizing work methods, dust cleanup practices, clearance, and record keeping.

All workers disturbing paint will be required to attend Lead Safe Work Practices (LSWP). The subgrantees will monitor and track their sub-contractors for compliance with LSWP training requirements, and will maintain records in their files. A copy of the Environmental Protection Agency (EPA) "Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools" will be provided to all occupants residing in pre-1978 dwelling units. A signed receipt must be obtained prior to the start of the weatherization work and will be kept in the client file. Weatherization work will be deferred where significant lead-based paint hazards are found and where the weatherization work may result in increasing lead levels in the home or surrounding areas. Where a child is identified with an elevated blood lead level special care will be taken to not disturb paint, or weatherization work will be deferred until the home is lead-safe.

DOE Weatherization funding will not be used to test, remediate, or abate a dwelling with lead-based paint. When possible, the subgrantees will coordinate efforts with other funding sources to assist the families make their dwellings lead-safe. If the subgrantee or contractor of the subgrantee suspects that there are high levels of lead in the home, and children are living in the home, in particular children younger than 6 years of age, referrals will be made to the local health department for testing of the children's blood for lead.

##### Mold and Moisture

Subgrantees will receive training to ensure that regular weatherization work is performed in a manner that does not contribute to mold or moisture problems. As part of the initial audit an assessment will be done to identify mold or moisture related problems. Minor conditions that cause mold and moisture issues in a dwelling unit and would affect the quality of the weatherization work will be addressed. DNREC has set a limit of \$400 per home (with prior approval, see "incidental cost") for such repairs that may be required to complete the weatherization work. In cases where significant remediation of toxic substances is required, DOE Weatherization funds will not be used, as this is not an allowable weatherization expense. DOE Weatherization funds will not be used to test, abate, remediate, purchase insurance, or alleviate existing mold or moisture conditions identified during the audit, the work performance period, or the quality control inspection. Weatherization services may need to be delayed until the existing mold or moisture problems can be referred to another agency for funding of remedial action.

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### STATE PLAN/MASTER FILE WORKSHEET (continued)

Identification Number: EE0000154, State: DE, Program Year: 2010

#### Asbestos

Auditors will be trained to identify dwelling units that may have asbestos materials. These units will be assessed and weatherization work will be performed if determined possible and safe. Asbestos, which is friable, is not permitted to be removed, covered, encapsulated, or disturbed during weatherization activities. These asbestos measures will not be charged to DOE Weatherization funding. If requested, a reasonable time for asbestos removal and clean-up will be given prior to weatherization. When possible, subgrantees will work with other funding sources to remove or remediate asbestos.

The attached Health and Safety Plan further addresses: crew and contractor health and safety; client health and safety; combustion appliances and combustion gasses; hazards of fires; existing occupant health problems; radon; formaldehyde and Volatile Organic Compounds (VOCs); electrical wiring; and other code related issues.

### III.5 Rental Procedures

To assist subgrantees with addressing landlord/tenant rental procedures, the State has developed a written agreement that requires signature of the landlord and the Contractor Agency. This agreement authorizes the agency staff and/or their contractors to: conduct inspections as required; install energy efficiency improvements to the property; and receive statements from fuel suppliers for evaluation. The agreement also prohibits rent increase due to weatherization work and requires landlord to pay back within one year cost of the weatherization work should the rent be increased, dwelling be sold, or mobile home moved. The agreement prohibits the landlord and/or contractor agency from charging anyone for labor or materials. Landlord forms must be included in all weatherized rental units as documentation of eligibility before any work commences.

As part of the State weatherization Policies and Procedures Manual, the state includes landlord procedures that address landlord contribution, and appeals to resolve disputes (440.22(d)). The manual addresses: subgrantees requirements to ensure that no undue enhancement occur to the value of the dwelling units. Undue enhancement is defined as any improvement to the property that goes beyond the scope of energy conservation work. In addition, the manual states that subgrantees are required to use all landlord contributions as part of the agreed upon weatherization work per 440.22(d); and to require that all landlord contributions not required as part of the work must be counted as leveraged funds and used to enhance the program. An active landlord contribution program, including financial contributions, will be considered in the Policies and Procedures Manual in accordance with DOE. Subgrantees are required to establish their own written procedures for addressing rental properties in their programs. These policies include requirements that subgrantees have written procedures for addressing landlord contributions in accordance with the Policies and Procedures Manual and with DOE regulations.

DNREC will assess future opportunities with multi-family dwelling units and follow DOE guidance as appropriate.

### III.6 Program Management

#### III.6.1 Overview

The Delaware Weatherization Assistance Program is administered by the Delaware Department of Natural Resources and Environmental Control's (DNREC) Division of Energy and Climate. The Division also contains the Delaware Energy Office and other key energy and climate policy staff for DNREC. Two subgrantees administer the Weatherization Program at the local level: First State Community Action Agency for Kent and Sussex Counties, and Neighborhood House, Inc. for New Castle County.

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### STATE PLAN/MASTER FILE WORKSHEET (continued)

Identification Number: EE0000154, State: DE, Program Year: 2010

#### III.6.2 Administrative Expenditure Limits

DNREC allows for maximum administrative expenditures of 5% of the subgrantees total expenditures. The state does not exercise the option of providing additional administrative funds from the State administrative portion to the subgrantees.

#### III.6.3 Monitoring Approach

The purpose of this monitoring approach is to assist the subgrantees in providing high quality energy conservation weatherization services to low-income individuals. In addition, monitoring ensures that high quality comprehensive services are consistently applied throughout the state. The State is hiring new program staff, outlined in the Budget narrative, to enable the new expanded monitoring, quality assurance, and training. Additional monitoring will ensure adherence to new program policies and procedures at the State level and effective implementation of the program at the local level. The goal of the monitoring approach is for constant communication, coordination, assistance, and constructive evaluation between DNREC and the subgrantees.

DNREC staff monitor the subgrantees regularly. On-site monitoring and quarterly administrative review of the subgrantees includes the following: client file review; the audit file (A-133 audit for each subgrantee); procurement procedures review; fiscal review; review of Liability & Pollution Occurrence Insurance (POI); review of compliance with all DOE and State regulations and procedures; and production management review. DNREC staff review the client files for completeness, accuracy, and appropriateness of forms and signatures. Monitoring staff also review timelines of vendor payments as well as evaluation of appropriateness of cost for services. DNREC conduct random quality assurance evaluations of 20% of all completed dwelling units weatherized for compliance, and 10% of the units while in process to ensure that policies and procedures are followed on the work site. The purpose of site visits is to ensure that weatherization services are provided in a professional and workmanlike manner in compliance with all standards, regulations and policies set forth by DNREC in the Weatherization Field Guide and the cost-effectiveness tests from the energy audit. The field inspection includes: base load measures installed, air sealing, insulation, CAZ testing etc. The monitor must verify that the work being performed is appropriate and effective, and in compliance with all DOE and State regulations. Monitoring staff also gather feedback from sub-contractors and program participants to better understand strengths, weaknesses and opportunities for improvement and Training and Technical Assistance.

DNREC uses monitoring to determine whether agencies are deficient in their procedures. Agencies found deficient will be required to remedy all deficiencies and will be offered training specific to the agencies' needs. The subgrantee is briefed on all observations and findings generated by the monitoring visit, through an exit interview. Within thirty (30) days of each visit, the State prepares a written report on its findings and sends it to the subgrantee for corrective action. The subgrantee has thirty (30) days to respond in writing. Failure to respond in writing to the monitoring report during the thirty-day period will result in claims being held at DNREC. Noncompliance findings, unresolved within forty-five days, are then reported to DOE. Sensitive or significant noncompliance findings are also reported to DOE immediately. The State tracks major findings from the subgrantee visits and prescribes a timeline for final resolution. Failure to comply with the timeline and specific corrective action goals jeopardizes the ability of the agency to maintain its status as a subgrantee. Evaluations of subgrantees are also a part of future competitive selection processes for the sub-grantees themselves.

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### STATE PLAN/MASTER FILE WORKSHEET (continued)

Identification Number: EE0000154, State: DE, Program Year: 2010

#### III.6.4 Training and Technical Assistance Approach

The State of Delaware's Training and Technical Assistance (T&TA) is intended to increase the efficiency and effectiveness of the weatherization program at all levels. T&TA activities are also designed to help maximize energy savings; minimize production costs; improve the quality of workmanship; and reduce the potential for waste, fraud and mismanagement. All stakeholders in the program including the state, the subgrantees, and the weatherization contractors and sub-contractors receive T&TA. Each stakeholder engages in training and/or receives technical assistance to replicate best practices and adhere to DOE standards of excellence throughout the entire project. Agencies receive T&TA consultations from the DNREC staff as appropriate. These visits assist local agency staff with issues relating to program operations, fiscal management, procurement procedures, and the technical aspects of the program.

##### Assessment of Training Needs

The State assesses the training needs of the subgrantees and contractors through quality assurance monitoring in the field, observations of performance, discussions, regularly scheduled management meetings, and monitoring visits. Through close monitoring of contractors' work, the subgrantees are able to further assess areas for improvement and provide robust feedback to the State for additional training needs of their private contractors.

##### Types of Training Provided

The State provides the following types of training to state, subgrantee staff, and local sub-contractors (see Section II.6. "Training, Technical Assistance, and Monitoring Activities" for more details.) :

**Management Training:** This includes training in production management; subcontract management and financial management. Attendance at training sessions is mandatory for program management personnel working in the weatherization program. In addition to subgrantee management training, technical assistance is provided for the state office by working with national experts in the weatherization field to ensure that Delaware incorporates best practices into program administration and field operations.

**Technical Training:** This includes training in energy auditing procedures, air sealing and construction techniques, heating systems, and quality control techniques. Attendance at these sessions is mandatory for the program management and quality control personnel. The subgrantees are also required to have their private weatherization subcontractors attend work specific and relevant training sessions on an annual basis. Subgrantee staff are encouraged to attend management and technical workshops offered at the regional and national weatherization conferences to gain further insights on best practices and to build relationships with other weatherization professionals. The State is working with local and national training providers recognized by DOE and the weatherization network to provide additional training for the Delaware Weatherization contractor network. Ongoing trainings will be provided throughout the next year, and will continue to emphasize the need for targeted quality energy conservation work.

**Comparative Productivity:** The State contracts with two subgrantees for the administration of the weatherization program. Monthly production reports submitted by the subgrantees are used to compare productivity.

**Assessment of T&TA Activities:** Continuous monitoring of work completed in the field, and of subgrantee files and operations assist the State with determining future training needs. In addition, the State continues to conduct meetings with its partners to better understand their training needs and to assess the effectiveness of their current training.

#### III.6.5 Energy Crisis Plan

**II.3 Subgrantees**

Grantee	City	Tentative	
		Funding	Units
First State Community Action Agency, Inc.	Georgetown	199,146.25	30
Neighborhood House, Inc.	Wilmington	199,146.25	30
<b>TOTALS</b>		398,292.50	60

**II.4 WAP Production Schedule**

<b>Total Units (excluding reweatherized)</b>	<b>60</b>
Units by type (excluding reweatherized):	
Owner-occupied single-family site-built	
Single-family rental site-built	
Multi-family	
Owner-occupied mobile home	
Renter-occupied mobile home	
Shelter	
Units by occupancy:	
Elderly	
Persons with disabilities	
Native American	
Children	
High residential energy user	
Household with a high energy burden	
Other unit types:	
<b>Rewatherized Units</b>	<b>0</b>

Average Unit Costs, including Reweathering, Subject to DOE Program Rules		
VEHICLE & EQUIPMENT AVERAGE COST PER DWELLING UNIT (DOE RULES)		
A	Total Vehicles & Equipment (\$5,000 or more) Budget	\$0.00
B	Total Units Weatherized	60
C	Total Units Reweatherized	0
D	Total Dwelling Units to be Weatherized and Reweatherized (B+C)	60
E	Average Vehicles & Equipment Acquisition Cost per Unit (A divided by D)	\$0.00
AVERAGE COST PER DWELLING UNIT (DOE RULES)		
F	Total Funds for Program Operations	\$345,270.50
G	Total Dwelling Units to be Weatherized and Reweatherized (from line D)	60
H	Average Program Operations Costs per Unit (F divided by G)	\$5,754.51
I	Average Vehicles & Equipment Acquisition Cost per Unit (from line E)	\$0.00
J	Total Average Cost per Dwelling (H plus I)	\$5,754.51

**II.5 Energy Savings**

Method used to calculate energy savings:

WAP algorithm

Other (describe below)

Estimated energy savings: 2,121.00 (MBtu)

Estimated prior year savings:

Actual:

If variance is large, explain:

**II.6 Training, Technical Assistance, and Monitoring Activities**

Delaware's Weatherization Assistance Program is housed in the State's Department of Natural Resources and Environmental Control (DNREC) in the Division of Energy and Climate. The overarching goals of the program are to ensure that the right services are delivered to the appropriate customers, using the best trained work force, and maximizing the value of energy efficiency services implemented for the dollar spent. Training, technical assistance and monitoring are essential to achieving the goals of the program. Throughout the next year, focus will be given to providing comprehensive training, technical assistance, and education for all weatherization staff, subgrantee staff, contractors, and auditors. Monitoring of all aspects of the program will be robust and designed to ensure effective and efficient program delivery which ensures that all activities strictly adhere to DOE and State requirements.

**II.7 DOE-Funded Leveraging Activities**

Not applicable

**II.8 Policy Advisory Council Members** (names, groups, agencies)

Katrina Eichler / Fuel Assistance Program Manager, Catholic Charities Inc	Ralph Nigro / Sustainable Energy Utility
Dr. John Byrne / University of Delaware	Brian McGlinchey / Laborer's International
Senator Harris B. McDowell (Ex-Officio Member)	
J.R. Blevins (Ex-Officio Member) / Private Contractor	
William LeCates / Sussex County Department of Community Development & Housing	
William E. Pelham / AIA Architect, PAC Chairman	

**II.9 State Plan Hearings** (send notes, minutes, or transcript to the DOE office)

Hearing Date	Newspapers that publicized the hearings and the dates that the notice ran.

**II.10 Adjustments to On-File Information**

Delaware is transitioning our program from the Department of Health and Social Services (DHSS) to the Department of Natural Resources and Environmental Control (DNREC). The shift is partly in response to the difficulties experienced with program oversight through much of 2009 and early 2010. The transition also is motivated by the goal to align energy services programs through one state agency responsible for energy service delivery and policy development statewide - DNREC.

The DNREC weatherization assistance program is located in DNREC's Division of Energy and Climate. This Division also contains the Delaware Energy Office and other key energy and climate policy staff for DNREC. The Division already implements energy efficiency programs and oversees the Sustainable Energy Utility (SEU), which has several extensive energy efficiency programs. DNREC's goal is to increase coordination among the state's energy and climate programs to help increase the resources going to low-income individuals and families for energy efficiency.

In addition, the State of Delaware is realigning State and local responsibilities and restructuring the Weatherization Program to have transparent and documented policies and procedures to ensure consistent and fair implementation of the weatherization program in compliance with DOE and State regulations. Other revisions to the State Plan include: requiring that the subgrantees have written procedures for: procurement; landlord contributions; and leveraged funds; allowing for subgrantees to claim under Program Operations the following costs: Health and Safety, Audits, final inspections, and Liability & IPO Insurance; defining Weatherization work as those measures required to reduce energy, to include only work allowed by the priority list, and that pass cost-effectiveness tests of a saving-to-investment ratio; limiting additional necessary weatherization materials or repairs to \$400 total per unit and only with prior approval of the subgrantee; allowing for up to \$50 in small base-load measure materials such as replacement bulbs, aerators and shower heads; requiring pre and post-blower door readings; requiring Worse Case CAZ testing after all work is completed on the dwelling, during the audit and the final inspection; enhancing the training being provided to the Delaware network as noted above; and prohibiting use of Weatherization funding to conduct lead remediation, mold and moisture remediation, asbestos remediation, and other environmental types of remediation. Subgrantees are to partner with other programs funded for those types of work; and purchasing equipment to conduct appropriate quality assurance inspections and monitoring.

**II.11 Miscellaneous**

**BUDGET INFORMATION - Non-Construction Programs**

1. Program/Project Identification No. EE0000154		2. Program/Project Title The Weatherization Assistance Program enables low-income families to permanently reduce their energy bills by making their homes more energy efficient. During the last 32 years, the U.S. Department of Energy's (DOE) Weatherization Assistance Program has provided weatherization services to more than 6.2 million low-income families.	
3. Name and Address Delaware, State of 1901 N. DuPont Hwy. New Castle DE 19720		4. Program/Project Start Date 04/01/2010	
		5. Completion Date 03/31/2011	

**SECTION A - BUDGET SUMMARY**

Grant Program Function or Activity (a)	Federal Catalog No. (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. DOE	81.042	\$ 50,428.03		\$ 460,428.00		\$ 510,856.03
2. STATE			\$ 0.00		\$ 0.00	\$ 0.00
3.						
4.						
5. TOTAL		\$ 50,428.03	\$ 0.00	\$ 460,428.00	\$ 0.00	\$ 510,856.03

**SECTION B - BUDGET CATEGORIES**

6. Object Class Categories	Grant Program, Function or Activity				Total (5)
	(1) GRANTEE ADMINISTRATION	(2) SUBGRANTEE ADMINISTRATION	(3) GRANTEE T&TA	(4) SUBGRANTEE T&TA	
a. Personnel	\$ 13,789.56	\$ 0.00	\$ 0.00	\$ 0.00	\$ 13,789.56
b. Benefits	\$ 7,051.65	\$ 0.00	\$ 0.00	\$ 0.00	\$ 7,051.65
c. Travel	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
d. Equipment	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
e. Supplies	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
f. Contract	\$ 0.00	\$ 23,022.00	\$ 90,000.00	\$ 0.00	\$ 488,292.50
g. Construction	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
h. Other	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
i. Total Direct Charges	\$ 20,841.21	\$ 23,022.00	\$ 90,000.00	\$ 0.00	\$ 509,133.71
j. Indirect	\$ 1,722.32	\$ 0.00	\$ 0.00	\$ 0.00	\$ 1,722.32
k. Totals	\$ 22,563.53	\$ 23,022.00	\$ 90,000.00	\$ 0.00	\$ 510,856.03
7. Program Income	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00

**BUDGET INFORMATION - Non-Construction Programs**

1. Program/Project Identification No. EE0000154		2. Program/Project Title The Weatherization Assistance Program enables low-income families to permanently reduce their energy bills by making their homes more energy efficient. During the last 32 years, the U.S. Department of Energy's (DOE) Weatherization Assistance Program has provided weatherization services to more than 6.2 million low-income families.	
3. Name and Address Delaware, State of 1901 N. DuPont Hwy. New Castle DE 19720		4. Program/Project Start Date 04/01/2010	
		5. Completion Date 03/31/2011	

SECTION A - BUDGET SUMMARY						
Grant Program Function or Activity (a)	Federal Catalog No. (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1.						
2.						
3.						
4.						
5. TOTAL		\$ 50,428.03	\$ 0.00	\$ 460,428.00	\$ 0.00	\$ 510,856.03

SECTION B - BUDGET CATEGORIES					
6. Object Class Categories	Grant Program, Function or Activity				Total (5)
	(1) PROGRAM OPERATIONS	(2) HEALTH AND SAFETY	(3)	(4)	
a. Personnel	\$ 0.00	\$ 0.00			\$ 13,789.56
b. Benefits	\$ 0.00	\$ 0.00			\$ 7,051.65
c. Travel	\$ 0.00	\$ 0.00			\$ 0.00
d. Equipment	\$ 0.00	\$ 0.00			\$ 0.00
e. Supplies	\$ 0.00	\$ 0.00			\$ 0.00
f. Contract	\$ 345,270.50	\$ 30,000.00			\$ 488,292.50
g. Construction	\$ 0.00	\$ 0.00			\$ 0.00
h. Other	\$ 0.00	\$ 0.00			\$ 0.00
i. Total Direct Charges	\$ 345,270.50	\$ 30,000.00			\$ 509,133.71
j. Indirect	\$ 0.00	\$ 0.00			\$ 1,722.32
k. Totals	\$ 345,270.50	\$ 30,000.00			\$ 510,856.03
7. Program Income	\$ 0.00	\$ 0.00			\$ 0.00

**U.S. DEPARTMENT OF ENERGY  
GOLDEN FIELD OFFICE**



**BUDGET EXPLANATION FOR FORMULA GRANTS**

Applicant: Delaware, State of  
Award number: EE0000154

Budget period: 04/01/2010 - 03/31/2011

**1. PERSONNEL** - Prime Applicant only (all other participant costs are listed in 6 below and form DOE F 4600.4, Section B. Line 6.f. Contracts and Sub-Grants).

Positions to be supported under the proposed award and brief description of the duties of professionals:

<b>Position</b>	<b>Description of Duties of Professionals</b>
Technical Expert (DNREC FTE)	Coordinates training programs for and performs evaluations of DNREC WAP staff, subgrantee staff, contractors, and auditors. These evaluations will be incorporated into ongoing reporting and future procurement processes. Staff for Jan 1, 2011, to March 31, 2011. 90% to ARRA, 10% to Base WAP. Annual salary of \$60,000.
Weatherization Program Manager (DNREC FTE)	Administers the program, manages the staff, and implements oversight of the program. Staff for Jan 1, 2011, to March 31, 2011. 90% to ARRA, 10% to Base WAP. Annual salary is \$80,000.
Social Service Administrator (Past DHSS Position)	Retired Previous Manager of the Weatherization Program. Charged to Program from 4/1/2010 to 7/31/2010 of WAP Grant Operations at 40% of Salary.

Direct Personnel Compensation:

<b>Position</b>	<b>Salary/Rate</b>	<b>Time</b>	<b>Direct Pay</b>
Technical Expert (DNREC FTE)	\$15,000.00	10.0000 % FT	\$1,500.00
Weatherization Program Manager (DNREC FTE)	\$20,000.00	10.0000 % FT	\$2,000.00
Social Service Administrator (Past DHSS Position)	\$25,722.00	40.0000 % FT	\$10,288.80
		<b>Direct Pay Total</b>	<b>\$13,788.80</b>

**2. FRINGE BENEFITS**

- Are the fringe cost rates approved by a Federal Agency? If so, identify the agency and date of latest rate agreement or audit below, and include a copy of the rate agreement.
- If a above does not apply, indicate the basis for computation of rates, including the types of benefits to be provided, the rate(s) used, and the cost base for each rate. You may provide the information below or provide the calculations as an attachment.

The rates for full-time employees (FTE) are: Pension 17.20%; Work Comp. 1.95%; Unemp. Ins. 0.17%; Medicare 1.45%; FICA 6.20%; and Total of 26.97%. Health Insurance varies, and we assumed \$11,722 for employee and spouse.

Fringe Benefits Calculations

<b>Position</b>	<b>Direct Pay</b>	<b>Rate</b>	<b>Benefits</b>
Technical Expert (DNREC FTE)	\$1,500.00	46.5100 %	\$697.65
Weatherization Program Manager (DNREC FTE)	\$2,000.00	41.6200 %	\$832.40
Social Service Administrator (Past DHSS Position)	\$10,288.80	53.6650 %	\$5,521.48
		<b>Fringe Benefits Total</b>	<b>\$7,051.53</b>

**3. TRAVEL** - Identify total foreign and domestic travel as separate items.

a. Proposed travel:

<b>Purpose of Trip</b>	<b>Number of Trips</b>	<b>Cost Per Trip</b>	<b>Total</b>
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b. Basis for computation of travel expenses (e.g., current airline quotes, past trips, federal or organization travel policy, etc.):  
N/A

**4. EQUIPMENT** - As defined in 10 CFR 660.202. Definitions are at [http://www.access.gpo.gov/nara/cfr/waisidx\\_00/10cf](http://www.access.gpo.gov/nara/cfr/waisidx_00/10cf)

a. Basis of cost estimates (e.g., vendor quotes, prior purchases of similar or like items, etc.):

N/A

b. Equipment to be purchased and justification of need:

<b>Equipment</b>	<b>Unit Cost</b>	<b>Number</b>	<b>Total Cost</b>	<b>Justification of Need</b>
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N/A

**5. MATERIALS AND SUPPLIES** - As defined in 10 CFR 660.202.

a. Basis cost estimates (e.g., vendor quotes, prior purchases of like items, etc.):

N/A

b. Supplies to be purchased and justification of need:

<b>General Category</b>	<b>Cost</b>	<b>Justification of Need</b>
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N/A

**6. CONTRACTS AND SUBGRANTS** - All other participant costs including subcontractor sub-grants, and consultants For ongoing subcontractors and sub recipients described elsewhere in the application, document and item numbe is listed.

<b>Name of Proposed Sub</b>	<b>Total Cost</b>	<b>Basis of Cost*</b>
Subgrantee Health & Safety Funds	\$30,000.00	Each of the two subgrantees receive \$15,000 for health and safety measures.
Neighborhood House, Inc.	\$172,635.25	Subgrantee Program Operations - 30 units weatherized.
First State Community Action Agency, Inc.	\$172,635.25	Subgrantee Program Operations - 30 units weatherized.
Subgrantee Administrative Costs	\$23,022.00	Subgrantee - Each subgrantee receives \$11,511 a year for administrative costs.
Training ongoing for all participants	\$90,000.00	Grantee T&TA - Additional training resources to maintain training of all participants.
Contracts and Subgrants Total	\$488,292.50	

\*For example, Competitive, Historical, Quote, Catalog

**7. OTHER DIRECT COSTS** - All direct costs not included in above categories

a. Basis for cost estimates (e.g., vendor quotes, prior purchase of similar items, etc.):

N/A

b. Other direct costs and justification of need:

<u>General Description</u>	<u>Cost</u>	<u>Justification of Need</u>
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8. **INDIRECT COSTS**

a. Are the indirect cost rates approved by a Federal agency? If so, identify the agency and date of latest rate agreement or audit and provide a copy of the rate agreement.

The latest agreement for Indirect Cost rates is dated 5/8/2009 between DNREC and EPA. The FY2010 rate for the Secretary's Office (Department Management) is 12.49%. This is applied to the salaries only of positions on the grant. The rates are negotiated with the EPA (our cognizant agency) by MAXIMUS, Inc. Their contact is Nick Goettsch, 804-323-3535.

b. If the above does not apply, indicate the basis for computation of rates, including the types of benefits to be provided, the rate(s) used, and the cost base for each rate. You may provide the information below or provide the calculations separately.

The name and phone number of the individual responsible for negotiating the State's indirect cost rates.

Name: Robert Bubacz

Phone Number: 3022559247

Indirect costs calculations:

<u>Indirect Cost Account</u>	<u>Direct Total</u>	<u>Indirect Rate</u>	<u>Total Indirect</u>
DNREC-OTS	\$13,789.56	12.4900 %	\$1,722.32
		Indirect Costs Total	\$1,722.32

# ATTACHMENT 1

## Delaware WAP Health and Safety Plan

### Introduction

In accordance with Weatherization Program Notice 03-1 Program Year 2003 Weatherization Grant Guidance, states are required to submit an updated Health and Safety Plan as part of this year's state plan master file. In response to this guidance as well as DOE Program Notice 02-5, Health and Safety Guidance, the following procedures have been developed for use by sub-grantee agencies to address existing or potential health and safety issues as part of weatherization services. Additional guidance and requirements will be included in Delaware's technical program standards and Weatherization Field Guide to be published and implemented during the 2004/05 program year.

### A. Grantee Health and Safety

The Department of Energy Guidance provides that energy related health and safety concerns are those that are necessary to be abated before or because of, the installation of weatherization materials. Therefore, health and safety hazards associated with weatherization activities that are energy related are allowed to be abated or prevented with DOE funds. Measures and their costs must be reasonable and must not seriously impair the primary energy conservation purpose of the program.

Costs related to Health and Safety performed as part of other weatherization measures or incidental repairs may continue to be charged to these categories. The material and labor costs associated with abatement of health and safety hazards will be those material and labor costs neither supported by energy savings of a weatherization measure(s), nor expended for purposes of incidental repairs. Further, such costs will be those for permissible abatement materials and associated labor necessary to find or eliminate health and safety hazards either prior to or resulting from the installation of weatherization materials.

### B. Crew or Contractor Health and Safety

With regard both to immediate and long-term hazards to workers, it is of great importance that agency staff maintain awareness of the potential hazards associated with the weatherization process.

The standards set forth in this document provide only general guidelines for health and safety concerns. Detailed specifications regarding the health and safety of workers in the construction industry can be found in Construction Industry OSHA Safety and Health Standards (299 CFR 1926/1910), which is available from the U.S. Department of Labor. These standards are applicable to all workers providing services using funding under the Weatherization Assistance Program.

Chapter XVIII, Subpart C, Item 1926.20 of the OSHA standards states that “ no contractor or subcontractor for any part of the contract work shall require any laborer or mechanic employed in the performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his/her health and safety.” Specific responsibilities provided under the OSHA standards are as follows:

- It shall be the responsibility of the sub-grantee/subcontractor to initiate and maintain such programs as may be necessary to comply with applicable OSHA Safety and Health Standards and:
- Such programs shall allow for regular inspection of job sites, materials, and equipment to be made by authorized persons designated by the employer. The use of machinery, tools, material or equipment, which is not in compliance with an applicable requirement of this part, is prohibited.
- The employer shall permit only those employees qualified by training or experience to operate equipment and machinery.

Deferral will be allowed for non-performance of audits, installations and/or inspections, or any portion of these functions if such action will expose workers to conditions regarded as unsafe or unhealthy as determined by OSHA Construction Industry Standards.

Each worker is responsible for working in a safe manner so as to not endanger either self or others. Sub-grantees are responsible for the development of an adequate safety policy and training, including disciplinary action against individuals who continue to demonstrate that they are unable to work in a safe, proficient manner. Additional guidance regarding crew safety will be provided in Delaware’s technical program standards and Field guide.

### **C. Client Health and Safety**

Weatherization must be provided in a manner that minimizes risks to workers and clients. Although the Weatherization Assistance Program is not capable of providing solutions for all health and safety issues, awareness of potential hazards is essential to providing quality services. Therefore, each dwelling must be individually assessed to determine the existence of potential hazards to workers and clients.

Local agencies and their representatives are to take reasonable precautions against performing work on dwellings that will subject clients to health and safety risks. In cases where work activities would constitute a health and safety hazard, action is required to limit or avoid particular measure(s) which may exacerbate a health or safety problem. Failing the ability to satisfactorily abate health or safety problem, the dwelling will be rejected for weatherization services.

## D. Potential Hazard Conditions

- a. Moisture Problems in dwellings to be weatherized should be corrected by the client, or by the client's contractor prior to commencement of weatherization services. However, if either because of infirmity or because of financial hardship such abatement cannot be accomplished by the client, health and safety funds may be expended for such abatement providing:
- in the judgment of the sub-grantee, the abatement is necessary in conjunction with proposed weatherization measures to protect the health and safety of the occupants
  - in the judgment of the sub-grantee, successful abatement is possible, material and labor cost can be considered low enough compared to the total cost of the completed job
  - in the judgment of the sub-grantee, the health and safety of the crew themselves would not be jeopardized by performing the abatement.

Failing any of the above criteria, weatherization should not be provided. In addition, no house may be weatherized in the event that a client refuses abatement recommendations prescribed by the sub-grantee.

Moisture abatement may include but is not limited to:

- installation or repair of a gutter or downspout
- unclogging a plugged field drain
- installation or repair of the exhaust ventilation
- removal of moisture absorbing or unsanitary materials
- replacing an inoperable sump pump

Additional guidance is provided in Delaware's technical program standards and Field Guide.

- b. Combustion Appliances and Combustion Gases - Carbon Monoxide (CO) will be routinely pre-tested for by the auditor, and post tested during the final inspection. When discovered CO production will be mitigated by appropriate necessary measures. Testing and appropriate mitigation procedures for heating systems and other combustion appliances are provided in Delaware's technical program standards and Field Guide.

The use of un-vented space heaters is discouraged through energy education. When possible, the repair or replacement of a non-functional primary heating system should be made in order to eliminate the need for

use of these devices and these devices should be replaced when they are the only means of providing heat for the dwelling unit.

Sub-grantees are instructed that no air sealing is permitted with the presence of a permanently mounted un-vented space heater and should provide written notification to the client regarding the dangers of using temporary heating appliances such as portable kerosene space heaters.

- c. Hazard of Fire is to be mitigated through inspection, first by the auditor, and if required, by a professional heating technician or a certified electrician and should include inspection of defective combustion chambers, and heat exchangers, over firing, defective connecting flues and chimneys, creosote build-up blockage, fuel leaks, etc. Also, open electrical junctions, recessed can lights or knob and tube wiring are not to be covered over when insulating attics.
- d. Existing Occupant Health Problems are to be generally assessed at the time of the audit. Based on this information, certain measures may be deferred if, in the judgment of the sub-grantee, a particular measure may exacerbate a pre-existing health problem (e.g. Blowing cellulose insulation or the use of certain air sealing materials). Also, in no case should work be performed that would disturb painted surfaces in a dwelling unit with an occupant that has been diagnosed with elevated blood lead level.
- e. Indoor Air Quality Problems will be mitigated to an extent by testing and retrofit of the heating system. Proper weatherization of the dwelling also tends to reduce or eliminate mechanisms, which either cause or enable air pressure imbalances within the dwelling and may lead to spilling and back drafting of combustion appliances. Activities which may correct these imbalances include but are not necessarily limited to the following:
  - established minimum flue gas temperatures
  - reduction of stack effect by strategic air-sealing at the top and bottom of a structure
  - installation of make-up air vents
  - sealing of open fireplaces
  - improvement of chimney draft
  - reducing pressure imbalances caused by forced air distribution systems

Reductions in leakage area of the dwelling which will allow the minimum in-flow of air necessary to support the needs of existing combustion devices, exhaust fans, and occupants should be avoided through use of guidelines establishing a minimum natural air change rate, and blower door minimum leakage rate. Such tests should be performed prior to, during and after weatherization of the unit. Further guidance regarding

issues of indoor air pollution as identified above is provided in Delaware's technical program standards and Field Guide.

1. Asbestos, which is friable, is not permitted to be removed, covered, encapsulated, or disturbed during weatherization activities. Dwelling occupants will be given written notice of such discovery, along with the address and telephone number of the regional EPA asbestos coordinator. If requested, a reasonable period of time for asbestos removal and clean-up will be given prior to weatherization.
  2. Radon discovery and mitigation requires professional testing and mitigation techniques well beyond the capabilities of the weatherization program to provide at the present level of funding. However, a dwelling properly weatherized and pressure neutralized should lower the level of radon entry and therefore benefit the occupants in this regard. In cases where the level of radon in the dwelling is known (through previous testing) to be high or there is a geographically recognized source problem, work that may exacerbate this problem (such as air sealing) should be limited as a precautionary measure.
  3. Formaldehyde and Volatile Organic Compounds (VOCs) - may be released by some new carpets, wafer board, plywood, etc. VOCs are also emitted by some household cleaning agents. Caution should be taken when selecting an air-sealing limit in dwellings suspected to contain VOC problems.
- f. Lead Based Paint – Risk assessment, abatement, hazard control or stabilization is not an allowable activity under the DOE Weatherization Program. However, work that is needed to prevent generation of dust and residues while performing approved weatherization measures that disturb surfaces that may contain lead based paint is allowable. Costs associated with implementing engineering controls and accepted clean-up protocols will be included in the average cost per home limitation. “Lead safe work practices” are necessary to prevent the possible exposure and effects of lead to both crew personnel and occupants of the dwelling. Lead safe work practices as identified are to be performed on dwellings where:
- the home was constructed prior to 1978
  - the home has not been determined to be lead free
  - the amount of disturbed lead based painted surface exceeds two square feet per room of interior surface, twenty square feet of exterior surface, or 10 percent of a small component type (eg. Window

## 1. Lead Safe Weatherization (LSW)

A copy of the EPA “Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools” will be provided to occupants residing in pre 1978 dwellings, as well as written certification of receipt prior to the start of weatherization work.

All weatherization personnel, who’s work duties may result in the disturbance of lead based paint in the course of weatherization must receive training/certification in lead safe work practices either sponsored by or approved by Delaware Office of Community Services (DOCS)

Equipment and supplies authorized for purchase and which are to be maintained by subcontractors include but are not limited to:

- High efficiency particulate air (HEPA) filter equipped vacuum cleaner that is specifically designed for heavy-duty use in a lead dust environment.
- NIOSH certified respirators with HEPA rated filters
- Protective clothing such as coveralls, shoe covers, hats, goggles and gloves.
- Other containment materials including 6-mil polyethylene plastic sheeting, duct tape, spray bottles, buckets with ringers, mops, rags and sponges; heavyduty plastic bags and cleaning products suitable for lead clean up.

Lead Safe Work Practices in accordance with the latest EPA and/or DOE guidelines will be detailed in Delaware’s technical program standards and Field Guide. Issues that will be discussed are safe practices for interior, exterior and window applications, daily clean-up, final clean-up, disposal and deferral policy.

Each sub-grantee must give notification to the occupants of homes to be weatherized regarding the potential hazards of lead paint and lead paint dust if the home was built prior to 1978. For homes weatherized after December 22, 2008, EPA’s new publication “Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools” must be given to an adult occupant of the affected home. For occupied homes, the Weatherization staff, crew, or contractor must have an adult tenant or homeowner sign an acknowledgement after receiving the pamphlet. The pamphlet can also be sent by certified mail with receipt to be placed in the customer file.

2. Lead-Safe Weatherization (LSW) includes weatherization worker protection, general LSW work practice standards, and lead dust containment standards. Please refer to the latest weatherization program standard for details.
  1. Level 1 Containment.
    - a. Level 1 Containment is required in pre-1978 homes when less than 6 ft<sup>2</sup> of interior painted surface per room or 20 ft<sup>2</sup> of exterior painted surface will be disturbed.
    - b. Level 1 Containment consists of methods that prevent dust generation and contains all debris generated during the work process. The containment establishes the work area which must be kept secure.
    - c. Measures that may fall within this guideline include:
      - i. Installing or replacing a thermostat.
      - ii. Drilling and patching test holes.
      - iii. Replacing HEPA filters and cleaning HEPA vacuums.
      - iv. Changing furnace filter.
      - v. Removing caulk or window putty (interior).
      - vi. Removing caulk or window putty (exterior).
      - vii. Removing weatherstripping.
  2. Level 2 Containment.
    - a. Level 2 Containment is required when Weatherization activities will disturb more than 6 ft<sup>2</sup> of interior surface per room or 20 ft<sup>2</sup> of exterior surfaces in homes built prior to 1978. Level 2 containment consists of methods that define a work area that will not allow any dust or debris from work area to spread. Level 2 Containment requires the covering of all horizontal surfaces, constructing barrier walls, sealing doorways, covering HVAC registers with approved materials, and closing windows to prevent the spread of dust and debris.
    - b. Measures requiring Level 2 Containment may include:
      - i. Drilling holes in interior walls.
      - ii. Drilling holes in exterior walls, removing painted siding.
      - iii. Cutting attic access into ceiling or knee walls.
      - iv. Planning a door in place.
      - v. Replacing door jambs and thresholds.
      - vi. Replacing windows or doors.
      - vii. Furnace replacements.
    - c. Additionally, Level 2 Containment must always be used where any of the following is conducted (even if the activities will disturb less than the hazard levels within the Level 1 category):
      - i. Window replacement.

- ii. Demolition of painted surface areas.
    - iii. Using any of the following: Open-flame burning or torching; machines to remove paint through high-speed operation without HEPA exhaust control; or operating a heat gun at temperatures at or above 1100 F<sup>o</sup>.
  - 3. There must be adequate documentation in the client file to demonstrate that lead safe weatherization measures were performed when necessary. Documentation should include photos of the site and containment set up, as well as a listing of materials used and measures taken. Post work inspector must also certify that LSW procedures were used and properly implemented.
  - 4. Delaware WAP will adhere to EPA lead safe rules as written in the “Lead; Renovation, Repair, and Painting Program” Final Rule (LRRPP Final Rule), as directed by DOE. Details of the rule are in the process of being finalized at the release of these Weatherization Standards, but are expected to be fully implemented by April 2010.
  - 5. Section 8 is infrequent in Delaware. However, these units will only be weatherized if HUD will provide certification that abatement or control of any lead paint hazard has been addressed, and will agree that the sub-grantees will not be liable for any lead hazards, provided the lead safe work practices generally outlined above are employed.
  - 6. Sub-grantees are not to weatherize homes where there are suspected or known lead paint hazards and there are any cases of documented or suspected lead poisoning. Additionally, they shall not weatherize homes where there is an extraordinary lead paint hazard and there are no means to abate the hazard, including insufficient funds or insufficient training to properly address the hazard.
- g. Building Structural Integrity - must be assessed at the time of the audit. Certain repairs to the building structure are allowable if they can be completed as in a health and safety measure identified in this plan or under the minor repair category, and are necessary for the proper installation of an approved weatherization measure. If adequate repair can not be accomplished the sub-grantee shall:
- Provide the client reasonable opportunity to make the appropriate repairs to the building or;
  - As reasonable refer the client to other available resources (e.g. housing rehab) to make the necessary repairs.
- In some instances it may be necessary to defer a particular weatherization measure due to the condition or structure of a building component. If the building structure is in such disrepair as to make the majority of needed measures ineffective, defer work on the dwelling entirely.
- h. Electrical Wiring is a basic housing need affecting home weatherization. The following specifications should be considered for electrical safety in dwellings:

- All home electrical systems should be grounded to a grounding rod or to a water pipe that has an uninterrupted electrical connection to the ground.
  - #14 copper or #12 aluminum wiring should be protected by a fuse or breaker rated for no more than 15 amps. # 12 copper or #10 aluminum should be protected by a fuse or breaker rated at no more than 20 amps.
  - S-type fuses should be installed where appropriate to prevent occupants from installing oversized fuses.
  - Wiring splices must be enclosed in metal or plastic electrical boxes, fitted with cover plates.
  - Electrical wiring to the furnace is to be inspected for the proper size, fusing, with a means to disconnect, and correct as required.
  - As disallowed by the National Electrical Code (NEC), “knob and tube” wiring is not permitted to be enclosed by insulation within building elements, but may be tented over and dammed to prevent insulation contact.
- i. Other Code Issues are the responsibility of the sub-grantee to insure that weatherization related work conforms with applicable codes in jurisdictions where the work is being performed.

#### **E. Deferral Standards**

Deferral Standards are addressed throughout this plan, as they relate to a specific health and safety issue identified. Deferral of weatherization services should be addressed as early in the process as possible, preferably as part of the initial audit, prior to any work being performed. Notification of deferral of services is to be provided to the client in writing and should identify when the client was informed, a clear description of the problem, conditions under which work could continue, the responsibilities of all parties involved, with signature of the client and an agency representative. As part of this notification the client will also have been informed of their rights under the client appeal process.