

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

(Grant Number: EE0006164, State: MO, Program Year: 2015)

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

V.1 Eligibility

V.1.1 Approach to Determining Client Eligibility

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

The State has set income guidelines at 200% of federal poverty level to comply with the federal WAP regulations. The annual revision of poverty income guidelines are published in the Federal Register in February or March. The State will inform each Subgrantee as the revisions are made available.

Describe what household Eligibility basis will be used in the Program

All household income for a minimum of three calendar months prior to the date of the application must be recorded by the subgrantee to verify the income eligibility. Income documentation is required for all wage earners who reside in the home. If an individual adult (over the age of 19) claims no income, a written statement declaring such, which is signed by that individual, is sufficient documentation and must be kept in the client file as well as uploaded to MoWAP. If no one in the home claims any income, a notarized zero-income form must be completed and signed by the applicant.

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

As instructed by DOE, Missouri will follow guidance provided by the U.S Department of Health and Human Services (HHS) under the Low Income Home Energy Assistance Program (LIHEAP) to ensure that "Qualified Aliens" are eligible for weatherization benefits.

"Qualified Aliens" are defined in section 431 of Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), commonly known as the welfare reform law. The Act covers the larger groups of legal immigrants (legal permanent residents, refugees, asylees, individuals paroled into the U.S. for a period of at least 1 year, individuals whose deportation has been withheld, individuals granted conditional entry, and certain individuals who are victims of domestic abuse). Qualified aliens are eligible to receive assistance and services under the LIWAP program so long as they meet other LIWAP program requirements.

V.1.2 Approach to Determining Building Eligibility

Procedures to determine that units weatherized have eligibility documentation

No dwelling unit may be weatherized without documentation that the dwelling unit is an eligible unit. All household income must be calculated per DOE requirements, and income and home ownership documented.

Describe Reweathering compliance

According to federal regulations, homes previously weatherized between September 30, 1975, and September 30, 1994 are eligible to be re-weatherized. Any home completed after September 30, 1994, is not eligible to be re-weatherized with federal funds.

Describe what structures are eligible for weatherization

1. Single Family: Single-family rental or owner-occupied units will remain the priority for weatherizing because multi-family units tend to not consume as much energy per family as single-family units.
2. Multi Family: Multi-family dwellings that receive WAP services must use the following guidance:
 - a) Single-family unit cost limitations apply;
 - b) Total cost may not exceed the maximum cost allowance multiplied by the total number of eligible units.

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3. Shelters: A shelter is defined in 10 CFR Part 440.3 as a dwelling unit or units whose principal purpose is to house, on a temporary basis, individuals who may or may not be related to one another and who are not living in nursing homes, prisons, or similar institutional care facilities. Subgrantees are authorized to weatherize shelters for the homeless, group homes or homes providing transitional living if the buildings are owned or rented by a not-for-profit agency and are used exclusively to provide temporary living quarters for the homeless, battered women or other WAP-eligible people as defined under 10 CFR Part 440.3.

State Historic Preservation Officer (SHPO) Programmatic Agreement

Section 106 of the National Historic Preservation Act of 1966 stipulates that all federally funded projects be reviewed to take into account the effect the proposed project will have on any property that is included in, or eligible for inclusion in the National Register of Historic Places. In order to comply with Section 106, DED/DE has signed an Interagency Agreement with the Missouri State Historic Preservation Office ("SHPO") (See Attachment 6.1 in the Missouri Technical Manual). This policy addresses operational changes to the Low-Income Weatherization Assistance Program that resulted from the agreement. Subgrantees are responsible for compliance with 36 CFR 800. Subgrantees may request advice, counsel or assistance from the State Historic Preservation Office or Division of Energy.

Describe how Rental Units/Multifamily Buildings will be addressed

The Missouri Department of Economic Development Division of Energy (DED/DE) permits rental units to be weatherized using special considerations. When work is performed on any type of rental unit, DED/DE recognizes a potential for owners to receive undue enhancement benefits. A building containing rental units may be weatherized if it is in compliance with income criteria and:

- a) The subgrantee has written permission from the owner or his agent.
- b) Not less than 66 percent (50 percent for duplexes and four-unit buildings, and certain eligible types of large multi-family buildings) of the dwelling units in the building:
 - 1) are eligible dwelling units;
 - 2) will become eligible dwelling units within 180 days under a local government, state, or federal program for rehabilitating a building, or making similar improvements, to the building.

In the Final Rule, published in the Friday, December 8, 2000, Federal Register/Vol. 65, No. 237, DOE offered flexibility by adding certain eligible types of large multi-family buildings to the list of dwellings that are exempt from the requirement that at least 66 percent of the units must be occupied by income eligible persons. In these large multi-family buildings, as few as 50 percent of the units, would have to be certified as eligible before Weatherization can be offered. This exception would apply only to those large multi-family buildings where an investment of DOE funds would result in a significant energy-efficiency improvement because of the upgrades to equipment, energy systems, common space, or the building shell. By providing this flexibility, local agencies will be better able to select the most cost effective investments and enhance their partnership efforts in attracting leveraged funds and/or landlord contributions. This flexibility does not apply to any other type of multifamily unit.

The DED/DE recognizes a potential for owners to receive undue enhancement benefits. Landlords must provide a minimum of a five percent (5%) cash contribution of estimated labor and material project costs before weatherization work can begin on a home. The requirement that the owner/landlord provide a minimum of a five percent (5%) cash contribution to the project will be waived if the owner/landlord's annual taxable income is at or below two hundred percent (200%) of the federal poverty level. Definition, verification, and documentation of owner/landlord income will follow the same guidelines as client income definition, verification, and documentation.

The amount of contribution above the minimum required five percent (5%) cash contribution is left to the judgment of the subgrantee. However, for multi-family structures with five or more units, the State has determined the owner/landlord will be required to contribute a minimum of a twenty-five percent (25%) of the weatherization project cost.

Undue enhancement is any work performed on a dwelling that cannot be expected to directly result in energy savings or the preservation of agency-installed work related to energy savings. Rental units are not eligible to receive furnace, refrigerator, water heater or air conditioner replacements as this has been determined to be undue enhancement. Subgrantees should only perform weatherization work that is based on the use of NEAT or MHEA weatherization measures, as well as limiting repairs to the definition of incidental repairs.

Describe the deferral Process

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There are some situations in which a subgrantee should not or may choose not to weatherize an otherwise eligible unit. In order to deal with these situations each subgrantee must develop a policy which, when implemented, allows weatherization staff to defer from conditions or circumstances that may be hazardous to their health and safety or that of the client.

In the event a subgrantee cannot or chooses not to weatherize a dwelling unit they must notify the client and owner/authorized agent in writing. The notification needs to be signed by the client and a copy of the signed notification shall be provided to the client and a copy kept in the client file. The notification needs to include the following items:

- a) The nature and extent of the problem(s) and how the problem(s) relate to the determination to not weatherize the unit;
- b) Any corrective action required before weatherization services can be initiated;
- c) A time limit for correcting problems so that weatherization services may be rescheduled;
- d) The right of appeal; and
- e) All correspondence justifying the decision to defer must be kept in the client file.

A subgrantee may defer or withhold weatherization services under the following conditions:

- a) A dwelling unit is vacant;
- b) A dwelling unit is for sale or in foreclosure;
- c) A dwelling unit is scheduled for demolition;
- d) A dwelling unit is found to have serious structural problems that would make weatherization impossible or impractical;
- e) A dwelling unit is deemed by the auditor to pose a threat to the health or safety of the crew, subcontractor or client;
- f) A mobile home is improperly installed (for example, inadequate supports);
- g) A dwelling unit is uninhabitable (for example, such as a burned out apartment);
- h) When there are minor children in the dwelling but no adult client or adult agent of the client, subgrantee personnel must not enter the dwelling;
- i) An adult client or adult agent of the client need not be present if the estimator or crew foreman feels satisfied with a signed note from an adult client or adult agent of the client stating their permission to enter the dwelling occupied by the minor children;
- j) The client is uncooperative with the weatherization subgrantee, either in demanding that certain work be done and refusing higher priority work which is needed, or by being abusive to the work crew or subcontractor, or by being unreasonable in allowing access to the unit, every attempt should be made to explain the program and the benefits of the work. If this fails, work should be suspended and the State Weatherization Office consulted;
- k) Obvious discrepancies are found between the information supplied by the client on the application and observed conditions at the time of weatherization. The subgrantee must resolve these discrepancies before weatherization work can continue;
- l) If, at any time prior to the beginning of work (materials installed in a unit), the subgrantee determines that the client is no longer eligible or subgrantee personal believe that circumstances may have changed, the unit shall not be weatherized until updated information can be obtained from the client;
- m) There are rats, bats, roaches, reptiles, insects, animals or other vermin that are inappropriately or not properly contained on the premises;
- n) There are health or safety hazards that must be corrected before weatherization services may begin including, but not limited to:

- (1) The presence of animal feces and/or other excrement,
- (2) Disconnected waste water pipes,
- (3) Hazardous electrical wiring, or
- (4) Unvented combustion appliances as a primary heat source

- o) There are illegal drugs or illegal activities occurring on the premises;
- p) The client or owner is physically or verbally abusive to subgrantee personnel;
- q) The dwelling unit or parts thereof are being remodeled and weatherization work is not coordinated with a housing rehabilitation program;
- r) The eligible household moves from the dwelling unit where weatherization activities and services are in progress. In such a case, the subgrantee must determine whether to complete the work and the circumstances must be documented in the client file.
- s) There are unusual situations, which in the judgment of the subgrantee staff, must be corrected before proceeding with weatherization:

- (1) No utility hookups (It is apparent that utilities have been shut off),
- (2) Lack of cooperation from client, or
- (3) Dwelling units undergoing remodeling, or which have untreated areas that directly affect the weatherization process, shall not be weatherized.

- t) If for any reason a worst-case draft test cannot be done in a dwelling requiring a worst-case draft;
- u) If weatherization work is to be completed on a dwelling unit with an unvented gas- and/or liquid-fueled space heater as the primary heat source;
- v) If a client has no fuel or electric at the time of the initial audit the subgrantee must defer the home until all necessary combustion safety tests and a blower door test can be performed.

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V.1.3 Definition of Children

Definition of children (below age): **19**

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.

Subgrantees will provide assistance to low-income Native Americans and other low-income persons on an equal basis.

V.2 Selection of Areas to Be Served

Services will be offered throughout the state of Missouri. Current service areas are based on the geographic boundaries of the State's Community Action Agencies (CAAs). The DED/DE administers federal funds to 18 regional Community Action Agencies, and one not-for profit organization.

V.3 Priorities for Service Delivery

Priority will be given to low-income elderly, persons with disabilities, and families with children. High Energy User and High Energy Burden are allowed criteria, but not mandatory. If a subgrantee chooses to use High Energy User or High Energy Burden as a priority criterion, they will be required to report this information to DED/DE. The DED/DE will report all subgrantee High Energy User and High Energy Burden information to DOE on the quarterly program report. The Missouri Low-Income Weatherization Assistance Program Operations Manual details client selection criteria including program priorities.

V.4 Climatic Conditions

See Attachment

V.5 Type of Weatherization Work to Be Done

V.5.1 Technical Guides and Materials

The state is committed to providing quality weatherization service on each client's home. With limited funds available, it is very important that funds be used to provide services which will result in the greatest savings per dollar. The state believes it is essential to use a process that correctly identifies energy conservation measures (ECMs) that provide the greatest chance to reduce energy consumption, maximize savings, and increase client comfort. It is also important that the selection of ECMs does not compromise the health and safety of the client. All subgrantee agreements and vendor contracts, active in Program Year 2015 and beyond, will contain language which documents the Standard Work Specifications for work quality outlined in QPN 15-4, Section 2. All work being performed in Program Year 2015 and beyond will be in accordance to the DOE-approved energy audit procedures and 10 CFR 440 Appendix A, as outlined in the DED/DE program operation manuals outline.

Types of work that may be done include:

- Air leakage reduction
- Attic insulation
- Wall insulation
- Foundation and floor insulation

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- Duct insulation
- Heating system clean and tunes, repairs, and replacements
- Health and safety
- Lighting retrofits
- Hot water heaters
- Air Condition (window unit and central air unit)
- Low-Cost/No-Cost Activities
 - An eligible unit may be weatherized from funds designated by the grantee for carrying out low-cost/no-cost weatherization activities provided:
 - Inexpensive weatherization materials are used, such as water flow controllers, furnace or cooling filters or items which are considered to be cost effective, but are unable to be cost justified using the approved computerized audit.
 - No labor will be paid with WAP funds to install the low-cost/no-cost materials.
 - A maximum of 10 percent of the amount allocated to the subgrantee, not to exceed \$50 in material cost per dwelling unit, may be expended to carry out low-cost/no-cost weatherization activities.
- Refrigerator Replacement
 - Only new refrigerators and refrigerator/freezers can be installed in weatherized housing. Replacements are limited to owner-occupied units. Replacement due to inefficiency must result in a savings to investment ratio of 1.0 or greater. All refrigerator replacements must follow DOE WPN 00-5.

DED/DE uses the following documents for both grantee and subgrantee for program guidance:

- State of Missouri Weatherization Program Procedural Operational Manual (issued 09/25/2014, updated 3/16/2015), [http://energy.mo.gov/energy/consumers/assistance-programs/low-income-weatherization-assistance-program-\(liwap\)](http://energy.mo.gov/energy/consumers/assistance-programs/low-income-weatherization-assistance-program-(liwap));
- State of Missouri Weatherization Program Technical Operational Manual (issued 9/24/2014, updated 4/1/2015), [http://energy.mo.gov/energy/weatherization_documents/WAPTechnical%20Ops%20Manual%20Attachments%20\(Oct%202014\)%20Final.pdf](http://energy.mo.gov/energy/weatherization_documents/WAPTechnical%20Ops%20Manual%20Attachments%20(Oct%202014)%20Final.pdf)
- Missouri Weatherization Field Guide (issued 9/24/2014); http://wxfieldguide.com/mo/MOWxFG_033115_Web.pdf
- EPA's Renovate Right and Lead-Safe Certified Guide to Renovate Right, <http://www2.epa.gov/lead>;
- A brief Guide to Mold and Moisture and Your Home, <http://www.epa.gov/mold/pdfs/moldguide.pdf>;
- DOE Standard Work Specification Tool, <https://sws.nrel.gov/>.
- DED/DE also provides a quarterly Technical News Letter to all subgrantees.

Distribution of field guides, operation manuals and standard work specifications to all subgrantees for all staff and contractors was done in September 2014 and additional copies are made available upon request. The grantee will ensure that materials are received by the appropriate parties as a part of in progress visits during technical monitoring.

All subgrantee agreements and vendor contracts, active in Program Year 2015 and beyond, will contain language which documents the Standard Work Specifications for work quality outlined in QPN 15-4, Section 2, as outlined in the Missouri Weatherization Program Operational Manual. All work being performed in Program Year 2015 and beyond is in accordance to the DOE-approved energy audit procedures and 10 CFR 440 Appendix A.

V.5.2 Energy Audit Procedures

Audit Procedures and Dates Most Recently Approved by DOE

Single-Family :	See Comments
Manufactured Housing :	See Comments
Multi-Family :	See Comments

Comments

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Single Family:

The NEAT audit was approved and used statewide since July 1, 1994. The NEAT audit was re-approved December 10, 2003. Audit material was submitted in PY 2008 for validation. DED/DE received DOE audit approval in May 2010. The DED/DE application for re-validation of the NEAT program for single family homes was submitted on March 31, 2015.

Manufactured Housing:

A site specific energy audit will be performed on each mobile home using the MHEA. Audit material was submitted during PY2008 for validation. DED/DE received DOE audit approval in May 2010. The DED/DE application for re-validation of the MHEA program for manufactured housing was submitted on March 31, 2015.

Multi-Family:

Multi-family buildings of 2 to 4 units will be weatherized using the NEAT audit. Multi-family buildings of 5 units or greater will be audited as described in the V.5.2 Comments.

Comments:

The energy audit procedures currently used in the Missouri WAP are of a comprehensive, holistic nature consisting of common sense, advanced diagnostic and assessment techniques, interior and exterior visual inspections, client interviews, and data collection. Additionally, the audit procedures employ the use of a computerized audit program as a tool to aid in selecting the most cost-effective measures.

The state has adopted the National Energy Audit Tool (NEAT) and the Manufactured Home Energy Audit (MHEA) developed by Oak Ridge National Laboratory (ORNL). The state began phasing in the NEAT audit on July 1, 1993. NEAT was used on a statewide basis beginning July 1, 1994 and the state began implementation of MHEA on July 1, 2008. Subgrantees need to update their NEAT and MHEA audits with the most recent version at the start of each program year. Subgrantees will also need to update their fuel costs and other applicable costs in the audits. Further changes to MHEA will be implemented periodically according to a planned maintenance/update schedule similar to that followed by NEAT on the past few years.

Audit material was submitted during PY2008 for validation. DED/DE received DOE audit approval in May 2010. DED/DE submitted an application for the re-verification of NEAT/MHEA computerized audit program on March 31, 2015.

Approximately 10 percent of units weatherized in Missouri are multi-family units. Multi-family buildings of 2 to 4 units will be weatherized using the NEAT audit. Multi-family buildings of 5 to 25 units that are individually heated and cooled will be weatherized using the NEAT audit. Multi-family buildings of greater than 25 units or buildings with 5 or more units that are not individually heated and cooled will be required to audit the building using a DOE and DED/DE approved multi-family audit assessment (TREAT, EA-QUIP or an engineering assessment). All multi-family buildings audited using a DOE and DED/DE approved multi-family audit assessment or an engineering assessment must be submitted to DOE and DED/DE for approval prior to work commencing.

V.5.3 Final Inspection

No dwelling unit may be reported to DOE as completed until all weatherization measures have been installed according to the work plan, or as documented in a change order request, and the subgrantee, or its authorized representative, has conducted a final inspection and certified that the work has been completed in a professional manner in accord with WAP work standards, Standard Work Specifications, and in accordance with the priority determined in 10 CFR 440. In addition, DED/DE also requires that all invoices associated with a dwelling unit have been received by the subgrantee. Units with estimated expenses will not be reimbursed.

As of July 1, 2015 all homes will have a final inspection performed by a certified Quality Control Inspector (QCI). Missouri will validate the QCI credentials of each person performing a QCI inspection. The QCI will include an assessment of the original audit and confirm that the measures called for on the work order were appropriate and in accordance with Missouri and approved protocols, as given in the Master File V.5.1: Technical Guides and Materials. The Missouri QCI Policy will be the DOE Prescribed QCI policy as described in WPN 15-4 Section 3, using both the Independent QCI and Independent Auditor/QCI.

To ensure sufficient number of certified Quality Control Inspectors, Missouri provided QCI training to subgrantees by Southface Energy Institute, an IREC Accredited Program, in spring 2014. All subgrantees without a certified QCI on staff by May 1, 2015 must provide an Action Plan to the grantee detailing how the subgrantee will ensure that all final inspections are performed by a certified QCI.

Missouri will perform monitoring on the QCI to ensure units are being inspected to standards adopted by the state and consistent with the Standard Work

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Specifications (SWS). The inspection forms that will be used by grantee monitors to ensure that work is completed in accordance with WPN 15-4 Section 1 are attached [Quality Assurance Checklist Form.pdf]. If it is determined that subgrantee QCI process is inadequate the procedures as outlined in the Master File V.8.3 will be followed.

V.6 Weatherization Analysis of Effectiveness

The "DED General Terms and Conditions for Federal Subgrants", subgrant Scope of Services, and Subgrant Assistance Agreement detail criteria deemed necessary for a Subgrantee to be considered in contract compliance with the State. Performance evaluations will be conducted throughout the grant period.

DED/DE evaluates subgrantee agencies to determine actual homes weatherized versus planned goals. Expenditures are reviewed to ensure a proper rate of grant expenditure. The reviews also evaluate both housing quality and procedural monitoring findings from on-site visits. In addition, the DED/DE will evaluate each subgrantee to help ensure that WAP funds are being used efficiently and effectively to serve the public.

NOTE: Subgrantee allocations, as shown on page one of the Annual File, include estimated carryover funds from PY2013. The actual carryover may vary based on actual, subgrantee expenditures through June 30, 2014.

If production and/or expenditures are deemed insufficient, DED/DE may recapture and redistribute funds to other, high performing subgrantees. The DED/DE will offer assistance, as resources allow, to help subgrantees increase production to successful performance levels. This assistance may include special technical or administrative training for subgrantee staff.

In the effort to help subgrantee production and expenditure rates, DED/DE has provided additional hands-on training and developed a web page listing WAP technical training courses available from vendors throughout the state. DED/DE technical staff continues to train subgrantee personnel to more fully and correctly weatherize homes.

The Missouri Low-Income Weatherization Assistance Program Operations Manual details terms for probation and procedures to terminate a weatherization subgrantee.

A monitoring tool has been developed and used to evaluate technical error rates after monitoring visits and to evaluate compliance. This monitoring tool remains under constant review for effectiveness.

V.7 Health and Safety

See Attachment

V.8 Program Management

V.8.1 Overview and Organization

The DED/DE administers the federal Low-Income Weatherization Assistance Program (LIWAP) statewide in Missouri. The DED/DE is organized into sections to provide measurable public benefit services to the citizens of the State of Missouri and that also contribute greatly to the LIWAP program. The LIWAP section contains the program management and technical staff. The program manager and other staff in the LIWAP section are responsible for the day-to-day operation of the LIWAP program including procedural and financial monitoring and technical monitoring of weatherized homes. The staff reviews and implements guidance and regulations regarding the LIWAP program. The technical staff is also responsible for performing housing inspections and providing technical assistance to the subgrantees. In addition, contract monitoring staff may be used as necessary. The Policy and Analysis section intervenes in utility rate cases to leverage more funding for LIWAP. The financial unit provides financial assistance in completion of the application for funding, subgrant assistance agreements, invoice processing, data collection and reporting, and assisting with procedural and financial monitoring.

Energy costs consume a far greater percentage of income in low-income households. In 2010, weatherized homes nationally saved \$2.1 billion. At current prices, home energy savings average \$437 each year. This allows low-income households to have more affordable energy bills and makes available more money for food, medicine, transportation and other necessities.

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The LIWAP reduces energy consumption and utility bills, keeps money in the local economy, has a positive impact on the household's promptness of utility payments and arrearages and reduces environmental pollution.

LIWAP Goals:

- Effective management of state and federal weatherization funds.
- Continuation of improved weatherization services. Increased energy-efficient housing, long-term reduction in utility bills and the comfort and safety of those served.
- Close working relationships with local weatherization agencies and others that are engaged in delivery of services to citizens of the State of Missouri.

V.8.2 Administrative Expenditure Limits

Each program year, DED/DE allocates at least five percent (5%) of new funding to be allocated as administrative funds to the WAP agencies. Subgrantees are asked to submit budgets that reflect what they plan to spend in the upcoming year with supporting documentation. DED/DE reviews each subgrantee budget and will approve budgets that have justified WAP costs. DED/DE then uses the approved subgrantee budgets to determine state-wide budget categories. Per DOE guidelines, the State may authorize additional administrative funds up to 5% of an agency's budget for Subgrantees with less than \$350,000 of allocation of federal WAP funds. To request this higher amount, a Subgrantee must document a need for additional administrative funds for WAP-related issues and obtain prior approval from DED/DE. These costs will be monitored by the DED/DE.

V.8.3 Monitoring Activities

See Attachment

V.8.4 Training and Technical Assistance Approach and Activities

The goals of the Missouri Low-Income Weatherization Assistance Program are to provide effective management of federal, state and local funding; continuation of improved weatherization services, increased energy efficient housing, long-term reduction in utility bills and comfort and safety of those served.

Training and Technical Assistance is an essential strategy to meet the goals of the Missouri Low-Income Weatherization Assistance Program. The following details training activities:

A. Assessment of Training Needs for Local Weatherization Agencies:

Monitoring oversight and agency reporting are indicators of local agency productivity and quality of weatherization retrofit. Training needs are identified through this monitoring oversight and addressed when needed. Additionally, training needs will be identified as needed to reflect feedback from DOE Project Office monitoring visits, internal state audits, Inspector General reports, etc.

Personnel inventories and surveys are used to determine the type of training required and the best means of providing instruction. Inventory and analysis of agency personnel, equipment, advanced technologies and protocols are used to determine the status of each agency's efforts in implementing new technologies; identifying agencies that are available to assist others in implementing new or advanced technologies.

Training and Technical Assistance meetings are held quarterly with the weatherization director's Energy Housing Professional Alliance group. The Technical Work Group Committee meets as needed to discuss updates and changes needed to stay current with policy. Regional technical trainings are provided by DED/DE when needed due to programmatic changes, health and safety implementation or if other training needs are identified on a statewide level.

Subgrantees and contractors will be checked at least annually for compliance with certification requirements such as QCI (after July 1, 2015), BPI, Lead Safe, OSHA 10 (required within 60 days of hire for crew members), and Weatherization Related Mold and Mildew training. Credentials are tracked by DED/DE by staffing updates being reported to DED/DE. The worksite will be checked for compliance with required health and safety equipment, personal protection gear, and reference materials. Training will be targeted to ensure necessary fulfillment and maintenance of the credentials and the implementation of DOE and DED/DE standards.

Beginning July 1, 2015, Missouri will comply with the Tier 1 training that meets the requirements of WPN 15-4 Section 4.

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B. Productivity of Agencies and Development of T&TA Activities and Priorities:

Monitoring oversight and agency reporting are indicators of local agency productivity and quality of weatherization retrofit. Advanced energy audit procedures (NEAT) are used for single-family dwelling units and (MHEA) are used for mobile home dwelling units. Advanced energy audits approved by the U.S. DOE and the DED/DE are used for multi-family dwelling units. A minimum savings-to-investment ratio of 1.0 is used as a threshold for the application of weatherization measures.

Although DED/DE does not compare the effectiveness and energy savings achieved between subgrantees (each subgrantee has a different housing stock and Missouri ranges between two different climate zones which makes it difficult to compare the effectiveness and energy savings between subgrantees) DED/DE does however track the subgrantees target infiltration reduction compared to the actual infiltration reduction. DE staff then provides training for those subgrantees with significant discrepancies between the target and actual reductions.

Inventory and analysis of agency personnel, equipment, advanced technologies and protocols are used in a variety of ways including:

- Determining the status of each agency's efforts in implementing new technologies
- Identifying agencies that are available to assist others in implementing new or advanced technologies
- Development of priorities within annual training plans.

C. Anticipated T&TA Activities:

To comply with the Tier I training requirements of WPN 15-4 Section 4, Missouri has released a RFP to obtain training from a DOE approved accredited organization for the NREL JTAs (Quality Control Inspector, Energy Auditor, Crew Leader, Retrofit Installer). Missouri intends to have two trainings per year pertaining to the NREL JTAs. The focus of the training will be tailored to the needs of the subgrantees by determination as described earlier in V.8.4.

To comply with the Tier II training requirements of WPN 15-4 Section 4 and implementation of the health and safety plan, Missouri anticipates providing a statewide training in PY15 that will coincide with the update of the Missouri Weatherization Operations Manual. Additional regional trainings are anticipated for subgrantee technical staff and on-site technical and procedural training as needed. All subgrantees are highly encouraged to attend the DED/DE provided trainings. If subgrantees do not attend the DED/DE trainings, on-site trainings will be conducted as needed.

Anticipated DED/DE staff training includes the DOE National Weatherization Conference and the NASCSP National Conference. Additional training for DED/DE staff will be determined on an as needed basis.

D. Client Education:

Client education is an effective method of improving the impact of weatherization measures. These efforts include fact sheets, brochures, the state DED/DE WAP website, and one-on-one communication. Subgrantees play a vital role in expanding client education activities at the local level. Local activities include client workshops, providing Energy Saver Booklets, client interviews and instruction when auditing and final inspecting the home, the explanation of information found in the Lead and Mold EPA pamphlets, local newspaper articles, and radio and television spots.

V.9 Energy Crisis and Disaster Plan

Disaster Plan:

Declaration of a disaster for WAP purposes is determined by a Presidential or gubernatorial order declaring either a Federal or State emergency. It may be the result of natural or man-made factors. The DED/DE Weatherization Assistance Program, through its subgrantee network, will assist state and community authorities in normalizing areas affected by a disaster by providing WAP resources, in a limited capacity, to assist Missouri low-income citizens in recovering and rebuilding after the disaster. As per DOE Weatherization Program Notice 12-07, the use of DOE WAP funds is limited to eligible weatherization activities and the purchase and delivery of weatherization materials. The Weatherization Program will adhere to the following guidelines when responding to any disasters in which the low-income population has been affected. These guidelines are intended to maximize the assistance we are able to provide while protecting the limited resources of the program.

Disaster-mitigation planning activities shall be implemented as soon as practical after the declaration of a disaster. A WAP subgrantee shall not commit WAP resources (labor or financial) until it receives approval from the DED/DE.

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Any additional disaster-related funds will be allocated based on the extent of the disaster in each subgrantee area. Funds must supplement, not supplant, other funds available for disaster assistance. All funds received by the client to cover damages must be considered prior to the allocation of WAP resources. Attachment 2-2, the Disaster Certification form located in the Missouri Weatherization Program Operational Manual, should be completed for each client requesting disaster assistance.

Safety measures, such as levees or other protections, should be in place prior to mitigation activities. Agency staff should consult with local utilities to ensure electric, gas and sewer hazards have been corrected or repaired.

A. Allowable Disaster Activities

Allowable expenditures under WAP include:

- 1) The cost of incidental repairs to an eligible dwelling unit if such repairs are necessary to make the installation of weatherization materials effective and,
- 2) The cost of eliminating health and safety hazards, elimination of which is necessary before the installation of weatherization materials (10 CFR 440.18(d)(9); 10 CFR 440.18(d)(15)). To the extent that the services are in support of eligible weatherization (or permissible re-weatherization) work, such expenditure would be allowable. For example, debris removal at a dwelling unit so that the unit can be weatherized would be an allowable cost. Debris removal from a dwelling unit that is not to be weatherized would not be an allowable cost. Please note that the \$6,904 per dwelling unit limit continues to apply.

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

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

The following ECM priority list is recommended for Weatherization eligible disaster homes:

Labor for gutting damaged components of the house and debris clean up

Primary heating system replacement and repair (including ductwork repair; replacement, cleaning and sealing of all joints; and venting, flue and chimney replacement, repair and cleaning)

Domestic water heaters (venting and flues included)

Window and door repair and/or replacement

Air sealing (basic infiltration and exfiltration work)

Attic insulation and ceiling coverage

Wall insulation

Restoration of electrical power (from electrical meter into the house)

Increased incidental and repair costs (DOE approval must be given for any increase in costs)

Specific procedures to weatherize mobile homes under the disaster provisions which are found in Attachment 2-3, Procedures for Weatherizing Flood-Damaged Mobile Homes, in the Missouri Weatherization Program Operational Manual.

B. Eligibility Requirements

WAP subgrantees must ensure that applicants for disaster assistance

- 1) Meet the current eligibility requirements,
- 2) Are located within the designated disaster area and

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3) Have been directly affected by the disaster. Homes located in a FEMA-sanctioned area are not eligible for assistance.

Applicant homes must be certified as habitable, and a disaster certification form must be completed, signed and retained in the client file. The owner of a rental unit must list the property with Section 8 or provide other proof that the unit will remain exclusively for the low-income. The normal landlord cash contribution will be required.

Client income eligibility may be based on one month's income if all other income documentation was lost in the disaster. WAP rules require that priority be given to identifying and providing weatherization assistance to elderly persons, persons with disabilities, families with children, high residential energy users, and households with high energy burdens (10 CFR 440.16(b)). However, it would be permissible to consider households located in the disaster area, as a priority as long as the households are eligible and meet one of the priorities established in regulation and are free and clear of any insurance claim or other form of compensation resulting from damage incurred from the disaster. Eligible disaster victims needing heating system or water heater repair or replacements will be served first.

Disaster-damaged homes may be re-weatherized without regard to the initial date of weatherization if the damage is not covered by insurance or other form of compensation. Victims may receive repair or replacement to domestic hot water heaters as a health-and-safety measure. If the sum of work performed to the home exceeds the DOE average expenditure per home limits, approval must be given by the state.

C. Equipment Procurement

All purchased items should meet minimum energy-efficiency ratings as detailed in 10 CFR 440, Appendix A. Subgrantees must comply with all requirements specified in 10 CFR Parts 600 and 440, OMB A-87 (if applicable), OMB A-122 (if applicable), and the requirements specified in the DNR General Terms and Conditions for Federal Subgrants, Missouri Weatherization Operational Program Manual's Competitive Procurement Standards.

D. Additional Funding

If additional funds are received from the department or other non-DOE fund sources, a subgrantee may allocate up to \$10,000 per unit. If no additional funds are received, the state plan cost limits apply. Program operations money may be used to support mitigation and clean-up activities for WAP eligible homes. No additional administrative funds will be provided for disaster work.

E. Disaster Expenditures Accountability and Reporting

Disaster expenditures must be accounted for and reported separately from other costs. The monthly MoWAP reimbursement must show these expenses under "disaster". The costs will be included in the averages.

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IV.1 Subgrantees

Subgrantee (City)	Planned Funds/Units
01-Community Services, Incorporated of Northwest Mo. (Maryville)	\$75,922.00 11
02-Delta Area Economic Opportunity Corporation (Portageville)	\$170,453.00 28
03-East Missouri Action Agency (Park Hills)	\$197,244.00 48
05-Economic Security Corporation of Southwest Area (Joplin)	\$192,288.00 79
06-Green Hills Community Action Agency (Trenton)	\$123,631.00 16
07-Central Missouri Community Action (Columbia)	\$247,346.00 34
08-Urban League of Metropolitan St. Louis (St. Louis)	\$335,829.00 39
09-Jefferson-Franklin Community Action Corporation (Hillsboro)	\$188,037.00 29
11-Community Action Agency of St. Louis County (Overland)	\$478,818.00 62
12-Missouri Ozarks Community Action, Inc. (Richland)	\$224,813.00 33
13-Missouri Valley Community Action Agency (Marshall)	\$161,671.00 35
14-North East Community Action Corporation (Bowling Green)	\$277,137.00 36
15-Northeast Missouri Community Action Agency (Kirksville)	\$81,561.00 16
16-Ozark Action, Inc. (West Plains)	\$145,160.00 25
17-Ozarks Area Community Action Corporation (Springfield)	\$507,373.00 75
18-South Central Missouri Community Action Agency (Winona)	\$136,872.00 28
19-West Central Missouri Community Action Agency (Appleton City)	\$189,953.00 24
35-Community Action Partnership of Greater St. Joseph (St. Joseph)	\$142,084.00 22
36-United Services Community Action Agency (Kansas City)	\$573,277.00 95
Total:	\$4,449,469.00 735

IV.2 WAP Production Schedule

Weatherization Plans	Units
Total Units (excluding reweatherized)	702
Reweatherized Units	33

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

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Average Unit Costs, Units subject to DOE Project Rules		
VEHICLE & EQUIPMENT AVERAGE COST PER DWELLING UNIT (DOE RULES)		
A	Total Vehicles & Equipment (\$5,000 or more) Budget	\$0.00
B	Total Units Weatherized	702
C	Total Units Reweatherized	33
D	Total Dwelling Units to be Weatherized and Reweatherized (B + C)	735
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	\$3,147,148.00
G	Total Dwelling Units to be Weatherized and Reweatherized (from line D)	735
H	Average Program Operations Costs per Unit (F divided by G)	\$4,281.83
I	Average Vehicles & Equipment Acquisition Cost per Unit (from line E)	\$0.00
J	Total Average Cost per Dwelling (H plus I)	\$4,281.83

IV.3 Energy Savings

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

Method used to calculate savings description:

The Missouri Department of Economic Development/Division of Energy (DED/DE) estimates that, for the Program Year 2015/2016 funding, a total of 735 homes will be weatherized. For these homes, it is estimated that 19,510 mmBtu/year of energy will be saved.

Method for calculating energy savings is as follows:

For determining the energy savings by fuel type, data from the Oak Ridge National Laboratories' report "Estimating the National effects of the US Department of Energy's Weatherization Assistance Program with State Level Data: A Metaevaluation Using Studies from 1993 to 2005" (ORNL/CON-493).

Average energy savings for gas heated homes 30.5 mmBtu/yr/home

Average energy savings for electric heated homes 6.6 mmBtu/yr/home

Average energy savings of electricity for non heating purposes 2.1 mmBtu/yr/home

Average energy savings for homes with combined gas heating and electric baseload savings 32.6 mmBtu/yr/home

Data collected from the Missouri Weatherization agencies, Homes Complete Summary PY 2008.

Percent of homes with electric savings only 22%

Percent of homes with gas savings only 16%

Percent of homes with both gas and electric savings 62%

.22 x 735 homes x 6.6 mmBtu/yr/home = 1,067 mmBtu/yr

.16 x 735 homes x 30.5 mmBtu/yr/home = 3,587 mmBtu/yr

.62 x 735 homes x 32.6 mmBtu/yr/home = 14,856 mmBtu/yr

Estimated PY 2015/2016 savings 19,510 mmBtu/yr

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This year estimated energy savings (MBtus):	19,510	
Prior year estimated energy savings (MBtus):	17,015	Actual: <input type="text"/>

IV.4 DOE-Funded Leveraging Activities

Federal regulations allow weatherization funds to be used for leveraging activities. Under leveraging, subgrantees work at developing relationships with utility companies, businesses, and other entities that generate non-federal resources for the program. Examples of some of the leveraging partnerships are donations from some local/national hardware and lumber stores, local realtors, etc. All Weatherization subgrantees participate in leveraging and partnership activities, although not all of them charge expenditures to the leveraging category for these activities.

Subgrantees may budget up to, but no more than, five percent (5%) of their grant allocation for leveraging activities. A leveraging plan is required to be submitted with each subgrantee budget if leveraging funds are to be utilized. Leveraging activities include paying for agency staff or hiring consultant staff to explore and develop partnerships with utility companies, businesses, and other entities that generate non-federal resources for the resources for the program. Other allowable activities include: holding leveraging meetings; preparing technical materials/briefs or facilitating voluntary match funds from a non-federal source. The leverage resources should expand energy efficiency services and/or increase the number of DOE-eligible dwelling units weatherized. The work done with leveraged resources must be consistent with an approved energy audit and utilize cost-effective measures. Leveraging efforts will not always be successful, but subgrantees should aim to produce more than one dollar leveraged for each DOE dollar expended.

IV.5 Policy Advisory Council Members

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

01-Community Services, Incorporated of Northwest Mo.	Type of organization: Local agency Contact Name: Bonnie Patterson, Executive Director Phone: 6605823113 Email: bpatterson.csi@gmail.com
12-Missouri Ozarks Community Action, Inc.	Type of organization: Local agency Contact Name: David Miller, Executive Director Phone: 5737653263 Email: dmiller@mocacaa.org
16-Ozark Action, Inc.	Type of organization: Local agency Contact Name: Terry Sanders, Weatherization Director Phone: 4172566147 Email: housedoctor@oaiwp.org
17-Ozarks Area Community Action Corp	Type of organization: Local agency Contact Name: Mr. Todd Steinmann, Weatherization Director Phone: (417)865-7797 Email: tsteinmann@oacac-caa.org
Boone Electric Cooperative	Type of organization: Utility Contact Name: Mr. Chris Rohlfing Phone: 5734494181 Email: crohlfing@booneelectric.com
Department of Health & Senior Services	Type of organization: Unit of State Government Contact Name: Charity Hunter Phone: 5735268560 Email: charity.hunter@health.mo.gov
Missouri Public Service Commission	Type of organization: Unit of State Government Contact Name: Kory Boustead Phone: 5735265009 Email: kory.boustead@psc.mo.gov
Office of Public Counsel	Type of organization: Unit of State Government Contact Name: Mr. Marc D. Poston Phone: (573)751-5558 Email: marc.poston@ded.mo.gov
The Laclede Group, Inc.	Type of organization: Utility Contact Name: Shaylyn Dean Phone: 8163605759

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Vacancy	Email: shaylyn.dean@thelacledegroup.com Type of organization: Contact Name: Phone: () - Email:
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IV.6 State Plan Hearings (Note: attach notes and transcripts to the SF-424)

Date Held	Newspapers that publicized the hearings and the dates the notice ran
04/14/2015	A public hearing regarding the Program Year 2015 DOE Weatherization State Plan for Missouri was held on April 14, 2015 in Jefferson City, Missouri. Notices for the public hearing were published on April, 3, 2015 in the following newspapers: Jefferson City Tribune and the Columbia Daily Tribune. In addition, the notice for the public hearing and the State Plan documents were sent via e-mail on April 2, 2015 to the Missouri Weatherization Policy Advisory Council and Missouri's Weatherization network of subgrantees. The documents were also uploaded to Missouri's Weatherization web page at: http://ded.mo.gov/division-of-energy/weatherization/low-income-weatherization-assistance-program-(liwap) .

IV.7 Miscellaneous

Recipient Business Officer:

Robert W. Mock
rob.mock@ded.mo.gov
 573-751-5955

Recipient Principal Investigator:

Lewis Mills
lewis.mills@ded.mo.gov
 573-751-2254

Missouri Weatherization Policy Advisory Council:

The Missouri Weatherization Policy Advisory Council membership shall reflect the relevant groups whom the program represents, in particular low-income households, especially those that include the elderly, the physically disadvantaged and families with children. Membership shall include, but not limited to, advocates of the Low Income Weatherization Assistance Program clientele who manage or deliver LIWAP program services, or who participate in or have a history of activities advocating low-income interests, or are recipients or eligible recipients of the Low Income Weatherization Assistance Program. Considerations shall be given to geographic and equitable representation of the state.

Elderly and Disability Representative - Charity Hunter, Department of Health and Senior Services, Division of Senior and Disability Services

Child Advocacy Representative - David Miller, Executive Director of the Missouri Ozarks Community Action, Inc. (MOCA). Programs administered by MOCA include Head Start and various other family development projects.

Technical Work Group:

The state, working with the Professional Alliance, formed a Technical Work Group. This group will advise the state on various technical matters. The Technical Work Group is represented by:

Kevin Scherr, DED/DE
 Todd McVicker, DED/DE
 Gene Elwood, DED/DE
 Terry Sanders, Ozark Action, Inc., West Plains
 Keith Jones, Urban League of Metropolitan St. Louis, St. Louis City
 Todd Steinmann, Ozarks Area Community Action Corporation, Springfield
 Caleb Cooley, East Missouri Action Agency, Park Hills

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Tim Huber, Community Action Agency of St. Louis County, St. Louis County

Ken Schneider, North East Community Action Corporation, Bowling Green

Matt Daniel, Economic Security Corporation of Southwest Area, Joplin

Dan Kosman, United Services Community Action Agency, Kansas City

The Technical Work Group will make technical recommendations regarding the Missouri Weatherization Program.

V.4 Climatic Conditions Attachment

The heating degree days (HDD) and cooling degree days (CDD) were obtained from the 2013 ASHRAE Handbook using the nearest World Meteorological Organization (WMO) location to the subgrantee service area. The combined total of both HDD and CDD ranges from a high of 6669 to a low of 5482. CDD range from a high of 2018 to a low of 1028. HDD range from a high of 5597 to a low of 3464. The Weatherization Assistant (WA), a DOE approved computerized audit tool developed by Oar Ridge National Laboratory provides HDD and CDD for use with the computerized audit tool, which is used to determine eligibility of measures installed.

Subgrantee # From Annual File	Subgrantee Acronym	Subgrantee City	WA (NEAT/MHEA) Weather Station	Nearest WMO Location	WMO #	HDD 65	CDD 65	Combined HDD & CDD
1	CSI	Maryville	Kansas City	St. Joseph/Rose-Cra	724490	5292	1251	6543
2	DAEOC	Portageville	Memphis, TN	Arkansas Intl, AR	723408	3464	2018	5482
3	EMAA	Park Hills	St. Louis	Farmington Rgnl	724454	4597	1226	5823
5	ESC	Joplin	Springfield	Joplin Rgnl	723495	4033	1638	5671
6	GHCAA	Trenton	Kansas City	Spickard (Amos)	725400	5534	1135	6669
7	CMCA	Columbia	Columbia	Columbia Regional	724450	4937	1247	6184
8	ULMSL	St. Louis	St. Louis	St. Louis/Lambert	724340	4436	1650	6086
9	JFCAC	Hillsboro	St. Louis	Farmington Rgnl	724454	4597	1226	5823
11	CAASTLC	Overland	St. Louis	St. Louis/Lambert	724340	4436	1650	6086
12	MOCA	Richland	Springfield	Rolla/Vichy Airport	724456	4680	1294	5974
13	MVCAA	Marshall	Columbia	Sedalia Memorial	724453	4635	1407	6042
14	NECAC	Bowling Green	St. Louis	St. Louis/Lambert	724340	4436	1650	6086
15	NMCAA	Kirksville	Columbia	Kirksville Rgnl	724455	5597	1028	6625
16	OAI	West Plains	Springfield	West Plains Muni	723484	4260	1334	5594
17	OACAC	Springfield	Springfield	Springfield Muni	724400	4442	1366	5808
18	SCMCAA	Winona	Springfield	Poplar Bluff (Amos)	723300	3988	1554	5542
19	WCMCAA	Appleton City	Columbia	Whiteman AFB	724467	4766	1419	6185
35	CAPSTJOE	St. Joseph	Kansas City	St. Joseph/Rose-Cra	724490	5292	1251	6543
36	USCAA	Kansas City	Kansas City	Kansas City Intl	724460	5012	1372	6384

V.7 Health and Safety

Missouri shall concur with and put in place a plan for implementing health and safety requirements outlined in WPN 11-6.

State of Missouri Weatherization Assistance Program Health & Safety Plan

Grantee Health and Safety Plan

Budgeting (Check one):

The grantee is encouraged to budget health and safety costs as a separate category and, thereby, excludes such costs from the average per-unit cost calculation. This separate category also allows these costs to be isolated from energy efficiency costs in program evaluations. The grantee is reminded that, if health and safety costs are budgeted and reported under the program operations category rather than the health and safety category, the related health and safety costs must be included in the calculation of the average cost per home and cost-justified through the audit.

Separate Health & Safety Budget Missouri exercises the option to budget health and safety costs as a separate budget category

Contained in Program Operations _____

Incidental Repairs (List repairs, if any, that will be removed as health and safety measures and implemented as incidental repairs.):

If the grantee chooses to identify any health and safety measures as incidental repairs, they must be implemented as such under the grantee’s weatherization program in all cases – meaning, they can never be applied to the health and safety budget category. In order to be considered incidental repairs, the measure must fit the following definition and be cost justified along with the associated efficiency measure. Incidental Repairs means those repairs necessary for the effective performance or preservation of weatherization materials. Such repairs include, but are not limited to, framing or repairing windows and doors which could not otherwise be caulked or weather-stripped and providing protective materials, such as paint, used to seal materials installed under this program.

Incidental repairs necessary for the effective performance or preservation of weatherization materials are allowed. Below are listed examples of incidental repairs and health and safety measures. Included is the expected average cost per incidental repair or health and safety measure. The list below is not an all-inclusive list of incidental repairs or health and safety measures.

Incidental Repairs		Health and Safety	
Measure Type	Expected Avg. Cost	Measure Type	Expected Avg. Cost
Building Structure Repair (i.e. floor repair, roof repair, etc.)	\$250	CO and/or Smoke Detector	\$50
Door Repair	\$100	Combustion Air Ventilation Repair/Replacement	\$200
Ductwork Repair	\$150	Cooling System Repair	\$300
Sump Pump Replacement	\$200	Cooling System Replacement	\$2,500
Window Repair	\$75	Dryer Vent Installation	\$75
		Electrical Repair	\$150
		Gas Leak Repair	\$50
		Heating System Clean and Tune	\$300
		Heating System Repair	\$300
		Heating System Replacement	\$3,000
		Vapor Barrier/Moisture Repair	\$150
		Ventilation Fan Installation	\$538.56
		Ventilation Fan Retrofit/Repair	\$125
		Water Heater Repair	\$200
		Water Heater Replacement	\$900

Incidental repairs will only be allowable expenses when the repair meets the definition of an incidental repair, as defined by 10 CFR 440. An example of an incidental repair would include the repair of a floor that must be done due to a leak from the water heater compromising the structural integrity of the floor and the installation of a replacement water heater as a health and safety measure could not otherwise be performed. Another example of an incidental repair would be the repair of a small leak in a roof so that cost effective insulation may be installed in the attic.

Health and Safety Expenditure Limits (Provide a per-unit average percentage and justification relative to the amount. Low percentages should include a statement of what other funding is being used to support health and safety costs, while larger percentages will require greater justification and relevant historical support.):

The grantee must set health and safety expenditure limits for their subgrantees, providing justification by explaining the basis for setting these limits and providing related historical experience. It is possible that these limits may vary depending upon conditions found in different geographical areas. These limits must be expressed as a percentage of the average cost per dwelling unit. For example, if the average cost per dwelling is \$5000, then an expenditure of \$500 per dwelling would equal 10 percent expenditures for health and safety. 10 percent is not a limit on H&S expenditures but exceeding this amount will require ample justification. These funds are to be expended by subgrantees in direct weatherization activities. While required as a percentage of the average unit cost, if budgeted separately, the health and safety costs are not calculated into the per-house limitation.

Per-Unit Average Percent: 20 % ($4,281.13 \times 20\% = \$856.23$)

Missouri exercises the option to budget health and safety costs separately. This average per home health and safety expenditure will be calculated across all production, not just those homes receiving health and safety work. During DOE Project Year 2014 (PY14) Missouri had a per unit average limit of 20 percent for health and safety.

DOE released WPN 11-6 in January of 2011, which provided guidance regarding health and safety measures within the Weatherization Assistance Program. From July 2014 to March 2015, Missouri spent a total of \$7,166,982 across all distributed weatherization program operation funds, with \$1,330,232.67 being health and safety funds, while weatherizing 1123 units. This amounts to an average health and safety cost per unit of \$1,184.53.

During this grant period, Missouri subgrantees are budgeted to weatherize 735 units; with an average cost per unit of \$4,281.13. The average health and safety cost is \$1,184.53 per unit from July 2014 to March 2015, which includes compliance with WPN 11-6, ASHRAE 62.2-2013 and, since October 2014, the Standard Work Specifications. Note that the \$1,184.53 is not a cap on per home expenditure; rather, it is an average health and safety cost for all homes completed. With the average health and safety cost per unit being \$1,184.53 and the average overall cost per unit being \$4,281.13, the average per unit percent for health and safety accounts for 27.6 percent; thereby, Missouri's per unit average percent for health and safety throughout the grant cycle will be 20 percent.

Missouri may request to exceed the 20 percent health and safety per home when ample justification can be provided.

Deferral Policy (Provide a detailed narrative of the grantees overall deferral policy):

Deferral may be necessary if health and safety issues cannot be adequately addressed according to WPN 11-6 guidance. The decision to defer work in a dwelling is difficult but necessary in some cases. This does not mean that assistance will never be available, but that work must be postponed until the problems can be resolved and/or alternative sources of help are found. In the judgment of the auditor, any conditions that exist, which may endanger the health and/or safety of the workers or occupants, should be deferred until the conditions are corrected. Deferral may also be necessary where occupants are uncooperative, abusive, or threatening. The grantee should be specific in their approach and provide the process for clients to be notified in writing of the deferral and what corrective actions are necessary for weatherization to continue. The grantee should also provide a process for the client to appeal to a higher level in the organization.

- a) There are some situations in which a subgrantee should not or may choose not to weatherize an otherwise eligible unit. In order to deal with these situations each subgrantee must develop a policy which, when implemented, allows weatherization staff to defer working on a home due to conditions or circumstances that may be hazardous to their health and safety or that of the client's.
- b) The following is an example deferral policy intended to list the more common conditions and situations a subgrantee may encounter while delivering weatherization services. This list is not intended to be all

inclusive of those instances in which a subgrantee may choose not to weatherize a unit. In some instances, corrective measures by the client/owner may allow program services to proceed. At a minimum, the subgrantee walk-away policy should contain the following:

Documentation

c) In the event a subgrantee cannot or chooses not to weatherize a dwelling unit it must notify the client and owner/authorized agent in writing and include the following items:

1. The client's name and address;
2. The dates of the audit/assessment;
3. A clear description of the nature and extent of the problem(s), how the problem(s) relate to the determination to not weatherize the unit, and the date of when the client was informed of the problem;
4. A statement of if, or when, conditions may warrant continuation of weatherization and any corrective action required before weatherization services can be initiated;
5. A time limit for correcting problems so that weatherization services may be rescheduled;
6. The responsibility of all parties involved;
7. The client's signature indicating understanding and being informed of their rights and options, including but not limited to the process necessary to appeal the deferral decision; and
8. All correspondence justifying the decision to defer work on a home must be kept in the client file.

Withholding of Weatherization Services

d) A subgrantee may withhold weatherization services under the following conditions:

1. A dwelling unit is vacant.
2. A dwelling unit is for sale or in foreclosure.
3. A dwelling unit is scheduled for demolition.
4. A dwelling unit is found to have serious structural problems that would make weatherization impossible or impractical.
5. A dwelling unit is deemed by the auditor to pose a threat to the health or safety of the client, crew or subcontractor.
6. A mobile home is improperly installed (for example, inadequate supports).
7. A dwelling unit is uninhabitable (for example, such as a burned out apartment).
8. When there are minor children in the dwelling but no adult client or adult agent of the client, subgrantee personnel must not enter the dwelling.
9. An adult client or adult agent of the client need not be present if the estimator or crew foreman feels satisfied with a signed note from an adult client or adult agent of the client stating their permission to enter the dwelling occupied by the minor children.
10. The client is uncooperative with the weatherization subgrantee, either in demanding that certain work be done and refusing higher priority work which is needed, or by being abusive to the work crew or subcontractor, or by being unreasonable in allowing access to the unit, every attempt should be made to explain the program and the benefits of the work. If this fails, work should be suspended and the State Weatherization Office consulted.
11. Obvious discrepancies are found between the information supplied by the client on the application and observed conditions at the time of weatherization. The subgrantee must resolve these discrepancies before weatherization work can continue.
12. If, at any time prior to the beginning of work (materials installed in a unit), the subgrantee determines that the client is no longer eligible or subgrantee personal believe that circumstances may have changed, the unit shall not be weatherized until updated information can be obtained from the client.
13. There are rats, bats, roaches, reptiles, insects, animals or other vermin that are inappropriately or not properly contained on the premises.

e) There are health or safety hazards that must be corrected before weatherization services may begin including, but not limited to:

1. The presence of animal feces and/or other excrement,
2. Disconnected waste water pipes,
3. Hazardous electrical wiring, or
4. Unvented combustion appliances.
5. There are illegal drugs or illegal activities occurring on the premises.
6. The client or owner is physically or verbally abusive to subgrantee personnel.

- 7. The dwelling unit or parts thereof are being remodeled and weatherization work is not coordinated with a housing rehabilitation program.
- 8. The eligible household moves from the dwelling unit where weatherization activities and services are in progress. In such a case, the subgrantee must determine whether to complete the work and the circumstances must be documented in the client file.
- 9. There are unusual situations, which in the judgment of the subgrantee staff, must be corrected before proceeding with weatherization.
 - 1) No utility hookups (It is apparent that utilities have been shut off).
 - 2) Lack of cooperation from client.
 - 3) Dwelling units undergoing remodeling, or which have untreated areas that directly affect the weatherization process, shall not be weatherized.
- 10. If for any reason a worst-case draft test cannot be done in a dwelling requiring a worst-case draft.
- 11. If weatherization work is to be completed on a dwelling unit with an unvented gas- and/or liquid-fueled space heater as the primary heat source.

Procedure for Identifying Occupant Health Concerns:
 Procedures must be developed and explained on how information is solicited from clients to reveal known or suspected occupant health concerns as part of the initial application for weatherization, additional screening of occupants again during the audit, and what steps will be taken to ensure that weatherization work will not worsen the health concern.

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

A subgrantee should ask clients if they have any health conditions that will be aggravated by the work required to install energy conservation retrofits. Precautions must be taken if the client will be unduly affected by dust, the smell from caulking chemicals or other attributes of the retrofit work so as to contain that part of the process and minimize any adverse effects.

Documentation Form(s) have been developed (Check Yes or No):
 Documentation forms must be developed, include the client's name and address, dates of the audit/assessment and when the client was informed of a potential health and safety issue, a clear description of the problem, a statement indicating if, or when weatherization could continue, and the client(s) signature(s) indicating that they understand and have been informed of their rights and options

Yes Each subgrantee is responsible for providing the documentation form, and each subgrantee has an individual deferral policy as directed in the Missouri Weatherization Program Operations Manual.

No _____

Completing the General Issue Tables below, or something similar, for each health and safety category will help explain to DOE how the WPN 11-6 requirements will be addressed.

Air Conditioning and Heating Systems	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is "required" or "not allowed" through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u>X</u>	"Red tagged", inoperable or nonexistent heating system replacement, repair, or installation is allowed, unless prevented by other DOE WAP guidance. Air

Alternative Guidance _____	conditioning system replacement, repair or installation is only allowed in homes of at-risk occupants.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the measure is determined to be beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
DED/DE will require each subgrantee to perform the following as part of the initial energy audit of each dwelling during the current Program Year:	
<ul style="list-style-type: none"> a) Test vented and unvented combustion appliances for carbon monoxide (CO) levels. b) Inspect furnace and water heater installations for sufficient combustion air (Refer to NFPA 54, National Fuel Gas Code). If the initial energy audit reveals a need for introducing more combustion air, it should be addressed as part of the weatherization process. c) Inspect and test heating equipment for a sound heat exchanger. Furnaces and other space-heating appliances that have a cracked heat exchanger are health and safety hazards that must be addressed and mitigated. Otherwise, the house must be deferred. Such appliances are also usually degraded to the point that their efficiency is greatly reduced. Replacements will be limited to owner-occupied units. Rental units that have an unsafe heating system will not be weatherized until the landlord has installed an approved, safely operating heating system. A site specific heating system replacement may be authorized by DED/DE on a case by case basis. d) Inspect and test heating equipment and the water heater for worst case depressurization and spillage. Venting must be installed in accordance with national, state and local codes. e) Inspect the water heater for health and safety hazards. Water heaters that pose a health and safety risk may be replaced, on a case by case basis, as a health and safety measure. Replacements will be limited to owner-occupied units. Rental units that have an unsafe water heater will not be weatherized until the landlord has installed an approved, safely operating water heater. A site-specific domestic water heater replacement from fuel to electric may be authorized by DED/DE on a case-by-case basis. f) Test fuel lines for leaks. g) Perform a post-blower door test to determine if the dwelling is within the ventilation guidelines. 	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.	
Deferral should be exercised when existing code violations are present and correcting them would be beyond the scope of the DOE WAP and/or when there are problems affecting the heat system/air conditioner that are beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.	
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.	
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP, such as electrical or other code violations. If the client is a renter referral may also be made to the landlord.	
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.	
Missouri provides a list of training providers, available on the DED website (http://ded.mo.gov/) that subgrantees may choose from, but are not limited to, at their own discretion. This list is updated monthly with available training providers around the state, their contact information, the courses they offer and course schedules. There are several training providers on this listing that offer health and safety courses such as Combustion Safety, Supplemental CAZ Testing, HVAC Service Technician, HVAC Installation, etc. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.	
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.	

<p>Clients shall be given all pertinent information on the appropriate use and maintenance of heating and cooling systems and the proper disposal of hazardous materials such as fuel and refrigerant gasses.</p>
<p>Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.</p>
<p>Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13-<u>Additional Safety</u>. All appliances with refrigerant that have been replaced must be decommissioned according to the Clean Air Act of 1990; Section 608, as amended by Final Rule 40 CFR 82, May 14, 1993. Replaced heating and cooling units cannot be returned to service by sale, barter, or given away for free.</p>
<p>Air Conditioning Installation (as specific to installation as a health and safety measure): Provide a narrative on implementation protocols of air conditioning repair, replacement, and installation including justification for allowability that includes climate justification with degree days and how to define at-risk occupants.</p>
<p>In the 2013 ASHRAE Handbook, the annual cooling degree day in Jefferson City, Missouri is 1,397. The average high temperature in Jefferson City in the month of July is 91.4 degrees Fahrenheit. Jefferson City is in the geographic and climatic center of the state and provides an accurate representation of the state as a whole. Missouri allows the repair, replacement or installation of air conditioners for at-risk occupants. At-risk occupants are determined by the occupant being able to provide a letter from a licensed physician stating that the occupant’s health and safety would be in danger without a functioning air conditioning unit.</p>
<p>Heating System Installation (as specific to installation as a health and safety measure): Provide a narrative on implementation protocols of Heating System repair, replacement, and installation including justification for allowability that includes climate justification with degree days.</p>
<p>In the 2013 ASHRAE Handbook, the annual heating degree day in Jefferson City, Missouri was 4,560. The average low temperature in Jefferson City in January is 7.1 degrees Fahrenheit. Jefferson City is in the geographic and climatic center of the state and provides an accurate representation of the state as a whole. Temperatures below zero are infrequent, but have occurred in every county in Missouri. Thus, heating system installation as a health and safety measure is allowable. DOE WAP funds may not be used on a home that will not have a safe heating system after all weatherization work is completed on the home.</p>

Appliances and Water Heaters	
<p>Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.</p>	
<p>Concurrence with WPN11-6 <input checked="" type="checkbox"/> <u>X</u> Alterative Guidance</p>	<p>Replacement of water heaters is allowed on a case by case basis. Replacement and installation of other appliances are not allowable health and safety costs. Repair and cleaning are allowed.</p>
<p>Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.</p>	
<p>DOE funds may be used.</p>	
<p>Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.</p>	
<p>If the measure is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.</p>	
<p>Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.</p>	
<p>DED/DE will require each subgrantee to perform the following as part of the initial energy audit of each dwelling during the current Program Year:</p> <ol style="list-style-type: none"> a) Test vented and unvented combustion appliances for carbon monoxide (CO) levels. b) Inspect furnace and water heater installations for sufficient combustion air (Refer to NFPA 54, National Fuel Gas Code). If the initial energy audit reveals a need for introducing more combustion air, it should be addressed as part of the weatherization process. c) Inspect and test heating equipment for a sound heat exchanger. Furnaces and other space-heating appliances that have a cracked heat exchanger are health and safety hazards that must be addressed and mitigated. Otherwise, the house must be rejected. Such appliances are also usually degraded to the point that their efficiency is greatly reduced. Replacements will be limited to owner-occupied units. Rental units that have 	

<p>an unsafe heating system will not be weatherized until the landlord has installed an approved, safely operating heating system. Replacements will be limited to natural gas, propane and oil-fired systems. A site specific heating system replacement may be authorized by DED/DE on a case by case basis.</p> <p>d) Inspect and test heating equipment and the water heater for proper venting. Venting must be installed in accordance with national, state, and local codes.</p> <p>e) Inspect the water heater for health and safety hazards. Water heaters that pose a health and safety risk may be replaced, on a case by case basis, as a health and safety measure. Replacements will be limited to owner-occupied units. Rental units that have an unsafe water heater will not be weatherized until the landlord has installed an approved, safely operating water heater. A site-specific domestic water heater replacement from fuel to electric may be authorized by DED/DE on a case-by-case basis.</p> <p>f) Test fuel lines for leaks.</p> <p>g) Perform a post-blower door test to determine if the dwelling is within the ventilation guidelines.</p>
<p>Standards for Deferral: Describe when deferral should take place for the specific health and safety category.</p>
<p>Deferral should be exercised when existing code violations are present and correcting them would be beyond the scope of the DOE WAP and/or when there are problems affecting the water heater/appliance that are beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.</p>
<p>Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.</p>
<p>Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP, such as electrical or other code violations. If the client is a renter referral may also be made to the landlord.</p>
<p>Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.</p>
<p>Missouri provides a list of training providers, available on the DED website (http://ded.mo.gov/) that subgrantees may choose from, but are not limited to, at their own discretion. This list is updated monthly with available training providers around the state, their contact information, the courses they offer and course schedules. There are several training providers on this listing that offer health and safety courses such as Combustion Safety, Supplemental CAZ Testing, HVAC Service Technician, HVAC Installation, etc. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.</p>
<p>Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.</p>
<p>Clients shall be given all pertinent information on the appropriate use and maintenance of appliances.</p>
<p>Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.</p>
<p>Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13-<u>Additional Safety</u>.</p>

Asbestos - in siding, walls, ceilings, etc.	
<p>Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.</p>	
<p>Concurrence with WPN11-6 <input checked="" type="checkbox"/> X Alternative Guidance _____</p>	<p>Removal of siding is allowed to perform energy conservation measures. All precautions must be taken not to damage siding. Asbestos siding should never be cut or drilled. Recommended, where possible, to insulate through home interior.</p>
<p>Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.</p>	
<p>DOE funds may be used</p>	
<p>Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.</p>	
<p>If the issue is determined to be beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional</p>	

deferral criteria.
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.
The Subgrantee shall inspect exterior wall surfaces and subsurfaces for asbestos siding prior to drilling or cutting.
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.
Deferral should be exercised when issues that may create a serious health concern are present and correcting them would be beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord. Clients may also be referred to the Missouri Department of Economic Development website (http://www.dnr.mo.gov/env/apcp/asbestos.htm) which contains Asbestos Occupational Certification Lists.
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.
Asbestos recognition training for weatherization workers, both in-house and contractor is critical to the protection of the Weatherization clients and the workers themselves. Weatherization workers are to be trained, by the subgrantee, on the identification of asbestos containing materials and how to handle them properly. The DED technical staff has provided multiple trainings for subgrantees in which they were reminded how to recognize asbestos and vermiculite. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
Clients shall be informed that suspected asbestos siding is present and how precautions will be taken.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Asbestos - in vermiculite	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <input checked="" type="checkbox"/> X Alternative Guidance _____	When vermiculite is present, unless testing determines otherwise, take precautionary measures as if it contains asbestos, such as not using blower door tests and utilizing personal air monitoring while in attics. Where blower door tests are performed, it is a best practice to perform pressurization instead of depressurization. Encapsulation by an appropriately trained asbestos control professional is allowed. Removal is not allowed.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
The Subgrantee shall assess whether vermiculite is present. Asbestos Hazard Emergency Response Act of 1986	

(AHERA) certified prescriptive sampling is allowed by a certified tester.
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.
Deferral should be exercised when issues that may create a serious health concern are present and correcting them would be beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord. Clients may also be referred to the Missouri Department of Economic Development website (http://www.dnr.mo.gov/env/apcp/asbestos.htm) which contains Asbestos Occupational Certification Lists.
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.
Asbestos recognition training for weatherization workers, both in-house and contractor is critical to the protection of the Weatherization clients and the workers themselves. Weatherization workers are to be trained, by the subgrantee, on the identification of asbestos containing materials and how to handle them properly. The DED technical staff has provided multiple trainings for subgrantees in which they were reminded how to recognize asbestos and vermiculite. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
Clients should be instructed not to disturb suspected asbestos containing material. Provide asbestos safety information to the client. Formally notify the client if test results are positive for asbestos and signed by the client.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Asbestos - on pipes, furnaces, other small covered surfaces	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <input checked="" type="checkbox"/> X Alternative Guidance _____	Assume asbestos is present in covering materials. Encapsulation is allowed by an AHERA asbestos control professional and should be conducted prior to blower door testing. Removal may be allowed by an AHERA asbestos control professional on a case by case basis.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
Asbestos abatement is normally beyond the scope of WAP work in Missouri. If a subgrantee determines that friable asbestos is present in a dwelling, a depressurization blower door test should not be performed. Reference in Missouri WAP Operational Manual 3.I.B.9.e Asbestos Inspection Procedures for more information. Asbestos issues will be referred to the appropriate State agency. AHERA testing is allowed by a certified tester.	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.	
Deferral should be exercised when issues that may create a serious health concern are present and correcting them	

would be beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord. Clients may also be referred to the Missouri Department of Economic Development website (http://www.dnr.mo.gov/env/apcp/asbestos.htm) which contains Asbestos Occupational Certification Lists.
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.
Asbestos recognition training for weatherization workers, both in-house and contractor is critical to the protection of the Weatherization clients and the workers themselves. Weatherization workers are to be trained, by the subgrantee, on the identification of asbestos containing materials and how to handle them properly. The DED technical staff has provided multiple trainings for subgrantees in which they were reminded how to recognize asbestos and vermiculite. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
Clients should be instructed not to disturb suspected asbestos containing material. Provide asbestos safety information to the client. Formally notify the client if test results are positive for asbestos and signed by the client.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Biological and Unsanitary Conditions - odors, mustiness, bacteria, viruses, raw sewage, rotting wood, etc.

Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u> Alternative Guidance	Remediation of conditions that may lead to or promote biological concerns and unsanitary conditions is allowed. Addressing bacteria and viruses is not an allowable cost.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
Where threatening conditions are found via sensory inspection, which may lead to a bacterial concern or unsanitary condition the correction of this threat is eligible as a health and safety expense. An example would be a hole in the floor where mice could enter and infest the home. If conditions such as feces in the home or a home infested with insects or rodents, the home should be deferred. An example would be, the home has animal feces or is infested with roaches, the agency should defer the home until the client has corrected the situation. When an existing harmful bacteria or virus condition is present in the home or work area, health and safety funds are not allowed to address the problem. The agency should defer the home until the client has corrected or eliminated the threat. For example, an occupant in the home has a virus which is contagious or signs of bacteria are present in the home, the home should be deferred.	

Standards for Deferral: Describe when deferral should take place for the specific health and safety category.
Deferral should be exercised when known agent is present in the home that may create a serious risk to occupants or weatherization crew. For additional deferral criteria, see deferral policy above.
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP, such as the presence of raw sewage or other known agents. If the client is a renter referral may also be made to the landlord. Referral to the Missouri Department of Health and Senior Services may be done if biological or virus agents are suspected. Information is available at http://health.mo.gov/index.php .
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.
Missouri provides a list of training providers, available on the DED website (http://dnr.mo.gov/) that subgrantees may choose from, but are not limited to, at their own discretion. This list is updated monthly with available training providers around the state, their contact information, the courses they offer and course schedules. Weatherization workers are to be trained, by the subgrantee, on the identification of biological and unsanitary conditions and how to handle them properly. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
Clients shall be informed of observed conditions. Information on how to maintain a sanitary home and steps to correct the deferral conditions will be provided.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Building Structure and Roofing	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u> Alternative Guidance	Building rehabilitation is beyond the scope of the WAP. Homes with conditions that require more than incidental repair should be deferred.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may not be used for building rehabilitation work that is beyond the scope of DOE WAP.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
Structurally compromised areas requiring more than incidental repairs shall be deemed beyond the scope of the WAP and shall be deferred.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
Before any work begins, the agency should conduct a visual inspection to be sure that all areas which will be accessed by the workers are safe to enter. If it is found that an area is not safe for workers to conduct weatherization the agency must decide if the repair is considered incidental or if it is beyond the scope of weatherization.	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.	
Homes that require more than incidental repair should be deferred.	
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.	
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral	

may also be made to the landlord.
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.
Missouri provides a list of training providers, available on the DED website (http://ded.mo.gov/) that subgrantees may choose from, but are not limited to, at their own discretion. This list is updated monthly with available training providers around the state, their contact information, the courses they offer and course schedules. There are several training providers on this listing that offer health and safety courses such as BPI Building Envelope Professional, Single Family Retrofit Basics, Weatherization training, Weatherization Mold and Moisture, etc. Weatherization workers are to be trained, by the subgrantee, on the identification of building structure and roofing issues and how to handle them properly. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
Clients shall be notified of structurally compromised areas.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Code Compliance	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <input checked="" type="checkbox"/> X Alternative Guidance _____	Correction of pre-existing code compliance issues is not an allowable cost other than where weatherization measures are being conducted. State and local (or jurisdiction having authority) codes must be followed while installing weatherization measures.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used when weatherization measures are being conducted. DOE funds may not be used to correct pre-existing code compliance issues other than where weatherization measures are being conducted.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to be beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
Visual inspection as well as local code enforcement inspections may be necessary. All state and local codes shall be followed when installing weatherization measures	
Each subgrantee is responsible to acquire all required permits and licenses pertinent to installing weatherization measures. These vary by jurisdiction and it is the responsibility of each subgrantee to know what the codes are in each of the areas they work, as well as what permits and licenses are required.	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.	
Condemned properties and properties where “red tagged” health and safety conditions exist that cannot be corrected under this guidance should be deferred.	
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.	
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.. Dwellings whose structural integrity is in question should be referred to the	

Missouri Department of Housing and Urban Development.
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.
Missouri provides a list of training providers, available on the DED website (http://ded.mo.gov/) that subgrantees may choose from, but are not limited to, at their own discretion. This list is updated monthly with available training providers around the state, their contact information, the courses they offer and course schedules. Weatherization workers are to be trained, by the subgrantee, on the identification of code compliance issues and how to handle them properly. The DED technical staff has provided multiple trainings for subgrantees in which they were reminded of code compliance issues, etc). Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
Clients shall be notified of observed code compliance issues.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Combustion Gases	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u>	Proper venting to the outside for combustion appliances, including gas dryers is required. Correction of venting is allowed when testing indicates a problem.
Alternative Guidance	
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
DED/DE will require each subgrantee to perform the following as part of the initial energy audit of each dwelling during the current Program Year:	
a) Test vented and unvented combustion appliances for carbon monoxide (CO) levels.	
b) Inspect furnace and water heater installations for sufficient combustion air (Refer to NFPA 54, National Fuel Gas Code). If the initial energy audit reveals a need for introducing more combustion air, it should be addressed as part of the weatherization process.	
c) Inspect and test heating equipment for a sound heat exchanger. Furnaces and other space-heating appliances that have a cracked heat exchanger are health and safety hazards that must be addressed and mitigated. Otherwise, the house must be rejected. Such appliances are also usually degraded to the point that their efficiency is greatly reduced.	
Replacements will be limited to owner-occupied units. Rental units that have an unsafe heating system will not be weatherized until the landlord has installed an approved, safely operating heating system. Replacements will be limited to natural gas, propane and oil-fired systems. A site specific heating system replacement may be authorized by DED/DE on a case by case basis.	
d) Inspect and test heating equipment and the water heater for proper flue/vent draft. Venting must be installed in accordance with national, state, and local codes.	
e) Inspect the water heater for health and safety hazards. Water heaters that pose a health and safety risk may be	

<p>replaced, on a case by case basis, as a health and safety measure. Replacements will be limited to owner-occupied units. Rental units that have an unsafe water heater will not be weatherized until the landlord has installed an approved, safely operating water heater. A site-specific domestic water heater replacement from fuel to electric may be authorized by DED/DE on a case-by-case basis.</p> <p>f) Test fuel lines for leaks.</p> <p>g) Perform a post-blower door test to determine if the dwelling is within the ventilation guidelines.</p>
<p>Standards for Deferral: Describe when deferral should take place for the specific health and safety category.</p>
<p>Deferral should be exercised when existing code violations are present and correcting them would be beyond the scope of the DOE WAP and/or when there are problems affecting the combustion appliance that are beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.</p>
<p>Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.</p>
<p>Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP, such as electrical or other code violations. If the client is a renter referral may also be made to the landlord.</p>
<p>Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.</p>
<p>Missouri provides a list of training providers, available on the DED website (http://ded.mo.gov/) that subgrantees may choose from, but are not limited to, at their own discretion. This list is updated monthly with available training providers around the state, their contact information, the courses they offer and course schedules. There are several training providers on this listing that offer health and safety courses such as Combustion Safety, Supplemental CAZ Testing, HVAC Service Technician, HVAC Installation, etc. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.</p>
<p>Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.</p>
<p>Clients shall be provided with combustion safety and hazards information, including the importance of using exhaust ventilation when cooking and the importance of keeping burners clean to limit the production of carbon monoxide.</p>
<p>Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.</p>
<p>Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13-<u>Additional Safety</u>.</p>
<p>Combustion Gas Problem Discovery: Provide a narrative describing the process to be followed when combustion gas testing reveals health and safety concerns.</p>
<p>When combustion appliances are present in the dwelling, or where there is reason to suspect a significant level of carbon monoxide (CO) present in the ambient air (such as with an attached garage) the ambient air will be tested for CO at the initial building audit and immediately after the implementation of weatherization measures. The testing procedure is:</p> <ol style="list-style-type: none"> (1) Establish building in the winter (heating season) mode with exterior windows and doors closed. (2) Calibrate CO testing equipment in the outdoor ambient. (3) Enter building and walk-through the various rooms and locations and note any areas where CO above outdoor ambient is found. (4) If levels higher than 9 parts per million (ppm) above outdoor levels are found, turn off all combustion appliances and ventilate the unit(s). (5) If measurable levels are 35 ppm or higher than outdoors, remove the occupants, turn off combustion appliances, ventilate the building and contact fuel vendor before continuing test. (6) If ambient CO levels are lower than 9 ppm above outdoors, proceed with testing of combustion appliances. <p>Any combustion gas problems that are discovered need to be addressed by the subgrantee prior to commencing work. CO alarms must be installed in all homes where a furnace return air could back draft a space heater, wood stove, fireplace or water heater. CO alarms should also be installed in homes which have attached garages.</p>

flashing, sump pumps, landscape, etc.

Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. **Note:** Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.

Concurrence with WPN11-6 <u> X </u>	Major drainage issues are beyond the scope of the WAP. Homes with conditions that may create a serious health concern that require more than incidental repairs should be deferred.
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Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.

DOE funds may not be used, except for incidental repairs.

Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.

If the issue is determined to be beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.

Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. **Note:** Some health and safety categories, like combustion gases, require testing.

Major drainage issues are beyond the scope of the WAP. Homes with conditions that may create a serious health concern that require more than incidental repair shall be deferred. Visual inspection shall be the primary mechanism for detecting drainage issues.

Standards for Deferral: Describe when deferral should take place for the specific health and safety category.

Deferral should be exercised when existing drainage issues that may create a serious health concern are present and correcting them would be beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.

Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.

Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.

Training Provision: Discuss how training will be provided for the specific health and safety category. **Note:** Some health and safety categories, like OSHA, require training.

Missouri provides a list of training providers, available on the DED website (<http://ded.mo.gov/>) that subgrantees may choose from, but are not limited to, at their own discretion. This list is updated monthly with available training providers around the state, their contact information, the courses they offer and course schedules. There are several training providers on this listing that offer health and safety courses such as BPI Building Envelope Professional, Single Family Retrofit Basics, Weatherization training, Weatherization Mold and Moisture, etc. Weatherization workers are to be trained, by the subgrantee, on the identification of drainage issues and how to handle them properly. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.

Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. **Note:** Some health and safety categories, like mold and moisture, require client education.

Clients shall be informed of the importance of cleaning and maintaining drainage systems.

Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.

Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13-Additional Safety.

Electrical, other than Knob-and-Tube Wiring

Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. **Note:** Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the

specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u> Alternative Guidance	Minor electrical repairs are allowed where health and safety of the occupant is at risk. Upgrades and repairs are allowed when necessary to perform specific weatherization measures.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category. DOE funds may be used.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP. If the issue is determined to be beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
Minor electrical repairs such as adding outlet covers; installing bulbs in open light socket; providing cover on electric service panels, etc are allowed in areas where weatherization work is being performed. Upgrades and repairs such as placing wire connections in sealed boxes in the attic before blowing insulation, flagging electrical connections and adding an electrical outlet for required mechanical ventilation are allowable expenses. Testing for correct wire size and breakers is an allowable expense. Ground-fault circuit interrupter (GFCI) devices should be tested to ensure that they are working properly in dwelling bathrooms and kitchens. If a GFCI is not installed in a dwelling bathroom, a subgrantee may have one installed, if appropriate, given that weatherization work is being performed in that area.	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category. Deferral should be exercised when existing electrical issues that may create a serious health and safety concern and correcting them would be beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.	
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies. Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.	
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training. Basic knowledge of electrical wiring and training for weatherization workers, both in-house and contractor is critical to the protection of the Weatherization clients and the workers themselves. Weatherization workers are to be trained, by the subgrantee, on the identification of unsafe electric wiring and how to handle it properly. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.	
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education. Clients shall be provided information on overloading circuits and electrical safety/risks.	
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards. Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .	

Electrical, Knob-and-Tube Wiring

Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. **Note:** Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing

will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u> Alternative Guidance _____	Minor upgrades and repairs necessary for weatherization measures and where health and safety of the occupant is at risk are allowed. Missouri does not allow insulation to be installed over knob and tube wiring.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used except to install insulation over knob-and-tube wiring which is not allowable. Funds may be used only for minor repairs and upgrades as stipulated above.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
If active knob-and-tube wiring is to remain in an attic, any insulation must be kept at least three inches from the wiring. Blown insulation must be appropriately dammed to keep the insulation from advancing closer than three inches from the knob-and-tube wiring. If active knob-and-tube wiring is to remain in a dwelling attic, walls, or basement, the walls of the dwelling must not be insulated. If knob-and-tube wiring has been deactivated and the dwelling has been rewired with BX, Romex, or other approved electrical cable, the attic and walls may be insulated without special precaution. DOE funds cannot be used to replace knob-and-tube wiring as a health and safety measure.	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.	
Deferral should be exercised when existing electrical issues that may create a serious health and safety concern and correcting them would be beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.	
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.	
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.	
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.	
Basic knowledge of electrical wiring, knob and tube wiring and training for weatherization workers, both in-house and contractor is critical to the protection of the Weatherization clients and the workers themselves. Weatherization workers are to be trained, by the subgrantee, on the identification of unsafe electric wiring, knob and tube wiring and how to handle it properly. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.	
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.	
Clients shall be provided information on over current protection, overloading circuits and basic electrical safety/risks.	
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.	
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .	

Fire Hazards

Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6	Correction of fire hazards is allowed when necessary to safely perform

<u> X </u> Alterative Guidance	weatherization.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
The auditor should be cognizant of fire hazards and address them when necessary to perform weatherization. If the subgrantee identifies a fire hazard which is not related to a weatherization measure, the agency may not make the repair; however, the agency must notify the client of the fire hazard. If the subgrantee identifies a fire hazard related to a weatherization measure that is beyond the scope of DOE WAP, the agency must defer the home.	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.	
Deferral should be exercised when existing issues may create a fire hazard and correcting them would be beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.	
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.	
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord. Referral to the Missouri Department of Public Safety and local Fire Chief may also be considered.	
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.	
Basic knowledge of fire hazards and training for weatherization workers, both in-house and contractor is critical to the protection of the Weatherization clients and the workers themselves. Weatherization workers are to be trained, by the subgrantee, on the identification of fire hazards and how to handle them properly. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.	
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.	
Clients shall be informed of observed hazards.	
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.	
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .	

Formaldehyde, Volatile Organic Compounds (VOCs), and other Air Pollutants	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u> Alterative Guidance	Removal of pollutants is allowed and is required if they pose a risk to workers. If pollutants pose a risk to workers and removal cannot be performed or is not allowed by the client, the unit must be deferred.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	

If the issue is determined that pollutants pose a risk to workers and removal cannot be performed or is not allowed by the client, the unit must be deferred. Refer to the deferral section above for additional deferral criteria.
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.
Auditors will conduct a sensory inspection for formaldehyde, VOCs and other air pollutants. Subgrantees will be advised that some new carpets, wafer board and plywood can emit formaldehyde. This is not specifically a weatherization responsibility. However, if a client has recently installed a large amount of these materials, the subgrantee will be advised that a curing time is desirable before the dwelling is air-tightened, and care should be taken to avoid excessive air tightening in such dwellings. Volatile Organic Compounds (VOC's) are the solvents in some caulking compounds, paint and cleaning agents. Subgrantees are advised to be cautious about using such materials inside dwellings.
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.
Deferral should be exercised when pollutants pose a risk to workers and removal cannot be performed or is not allowed by the client, the unit must be deferred. For additional deferral criteria, see deferral policy above.
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.
Basic knowledge of VOCs and training for weatherization workers, both in-house and contractor is critical to the protection of the Weatherization clients and the workers themselves. Weatherization workers are to be trained, by the subgrantee, on the identification of VOCs and how to handle them properly. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
Clients shall be informed of observed conditions and associated risks. Subgrantee will provide the client written materials on safety and proper disposal of household pollutants.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Injury Prevention of Occupants and Weatherization Workers – Measures such as repairing stairs and replacing handrails.	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u> Alternative Guidance _____	Workers must take all reasonable precautions against performing work on homes that will subject workers or occupants to health and safety risks. Minor repairs and installation may be conducted only when necessary to effectively weatherize the home; otherwise these measures are not allowed.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	

Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.
Subgrantee staff will observe if dangers are present that would prevent weatherization.
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.
If the issue is determined to be beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.
Missouri provides a list of training providers, available on the DED website (http://ded.mo.gov/) that subgrantees may choose from, but are not limited to, at their own discretion. This list is updated monthly with available training providers around the state, their contact information, the courses they offer and course schedules. There are several training providers on this listing that offer health and safety courses such as OSHA 10, etc. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
Clients shall be informed of observed conditions and associated risks.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Lead Based Paint

Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u> Alternative Guidance _____	Follow EPA’s Lead; Renovation, Repair and Painting Program (RRP) rule which was implemented April 21, 2010. In addition to RRP, Weatherization requires all weatherization crews working in pre-1978 housing to be trained in Lead Safe Weatherization (LSW). Deferral is required when the extent and condition of lead-based paint in the house would potentially create further health and safety hazards.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to be beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
Lead Safe Weatherization (LSW) is a set of protocols to be used when disturbing surfaces that may have lead-based paint that will reduce and control the amount of lead dust and paint chips that are generated. The protocols involve setup and cleanup practices that contain the spread of the lead dust during Weatherization work and eliminate most	

traces of the lead dust and debris (generated from the weatherization activities) when the work is finished. LSW Exemptions - Lead Safe Weatherization must be applied to all pre-1978 housing with the exception of the following three conditions:

1. When existing evidence shows that the home has been certified as being lead-free or below the lead threshold limits. When doing so, one of the following methods must be used to determine the paint to be disturbed is not lead-based paint:
 - a) Written determination by a certified lead inspector or risk assessor.
 - b) Proper use of EPA-recognized test, performed by a Certified Renovator.
2. Mobile homes built prior to 1978 that were not painted by the manufacturer, occupant, landlord, or past owner of the unit prior to 1978.
3. When minor repairs or maintenance activities will disturb less than 6 six square feet per room for interior activity. Exemptions to this would include window replacement, demolition of painted surface areas and use of any of the following: open flame or torch, use of a high-speed machine to remove paint, or heat gun at temperatures above 1100 degrees Fahrenheit.
4. The EPA published a new Final Rule in April of 2008: the "Lead: Renovation, Repair, and Painting Program" Final Rule (LRRPP Final Rule). Under certain, fairly common circumstances, the Final Rule requires weatherization providers to give a copy of the EPA booklet "Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools" prior to the start of work. The rule also has a record-keeping requirement.
5. Refer to the "Lead-Safe Weatherization: A Training and Reference Manual for Weatherization Managers and Crews" for reference material about lead safe work practices. The notebook was distributed to each agency.

Standards for Deferral: Describe when deferral should take place for the specific health and safety category.

It may be prudent to defer certain Weatherization work in homes that have either tested positive or are assumed to have lead-based painted surfaces. Even if the home does contain lead-based paint, regular weatherization work that does not disturb painted surfaces and does not stir up lead-based paint laden dust residues can be done. The following steps are recommended:

1. First, the subgrantee should assess the following factors:
 - a) What is the condition of the painted surfaces in the house?
 - b) How will specific energy efficiency measures disturb painted surfaces? (will the disturbance generate dust in excess of OSHA minimums)
 - c) Will the cost of doing LSW be a large portion of the total cost, exceeding the amount allowed by state's health and safety plan?
2. Second, based on above factors, weatherization agencies should determine whether to:
 - a) Proceed with all weatherization work, following LSW work practices.
 - b) Do some of the weatherization tasks and defer others.
 - c) Defer all of the weatherization work. Deferral would mean postponing the work until the weatherization agency is prepared to work with lead-based paint, or until another agency has corrected the problem. In cases where extensive LSW would be necessary, agencies are encourage to arrange with other organizations, which are funded to do lead paint hazard control, to perform some of the more costly activities, such as entrance testing or clearance testing. In areas where there are no organizations performing such work, weatherization agencies may choose to develop their own capabilities for lead-based paint hazard control work, but they may not use DOE Weatherization funds for this purpose.

Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.

Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord. Clients may also be referred to the Missouri Department of Health and Senior Services website (<http://health.mo.gov/safety/leadlicensing/>) which contains a licensed lead professionals list.

Training Provision: Discuss how training will be provided for the specific health and safety category. **Note:** Some health and safety categories, like OSHA, require training.

LSW training for Weatherization workers, both in-house and contractor is critical to the protection of Weatherization clients and the workers themselves. Training or retraining for crew members and contractors will be conducted in LSW using either the DOE benchmark LSW Curriculum or an equivalent curriculum. Crewmembers and contractors need to have the training before they work on homes with lead paint where painted surfaces in those homes will be disturbed in the course of doing Weatherization measures. Re-training for LSW needs to be completed within a three-year period. As of April 22, 2010, agencies and contractors addressing activities that disturb lead-based paint in target homes and child occupied facilities must follow the Environmental Protection

Agency's (EPA) Renovation, Repair, and Paint (RRP) Final Rules (Section 402 (c) (3) of TSCA). New crewmembers and contractors are required to be trained within a six-month period. However, they cannot work on a home(s) with lead until becoming a Certified Renovator or being trained on site by a Certified Renovator. Refresher training is required every 5-years. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.

Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. **Note:** Some health and safety categories, like mold and moisture, require client education.

Subgrantees will follow all EPA RRP requirements for client education as outlined in the EPA, RRP April 22, 2008, published rule (40 CFR Part 745).

Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.

Always collect, bag, and seal all waste at the work site and in the work area. Do not carry the waste to another room or another area before bagging and sealing. Store all waste in a secure container or dumpster until disposal. Avoid collecting bags of debris in work vehicles or in shops. Also, avoid transporting waste in an open truck. If this is the only method of transportation, cover the bed tightly with a tarp. Subgrantees will follow all EPA RRP requirements for disposal as outlined in the EPA, RRP April 22, 2008, published rule (40 CFR Part 745).

Lead Based Paint Compliance: Provide a narrative describing how RRP and LSW implementation will be conducted and how the grantee will verify compliance. The explanation should clearly show an understanding that LSW and RRP are separate requirements and both are required to be met.

Compliance Verification - Monitoring staff will assess LSW during routine monitoring visits.

1. Check inventory for critical materials and necessary crew protective gear.
2. Assess working conditions, equipment and crew for possible lead contamination.
3. Assess the level of lead safe weatherization training that crews and contractors have received.
4. Determine if there is a need for additional training based upon materials assessment, protective gear available, and working conditions.

Non-Compliance Protocol - If an agency is found not following Lead Safe Weatherization practices, the DED/DE will increase monitoring frequency. DED/DE will conduct additional audits on homes during the weatherization work. The agency will also be required to provide additional training to their crew/contractors.

Client Health & Safety - Lead Safe Weatherization requires that residents and pets not have access to the work area while work is underway. Agency staff is required to make every effort to contain the work area and eliminate tracking any dust or materials throughout the house, or exposing residents and pets to any contaminants. If containment cannot be achieved and there is a risk of traffic through the work area (e.g., work will take several days involving the kitchen, bathroom, or bedrooms) agencies are advised to defer the work until other resources can be secured to offset relocation expense for the residents and pets.

Weatherization Worker Protection - DOE requires subgrantees to follow the specified EPA requirements. By adopting basic safety precautions and LSW, Weatherization Programs can protect workers and the occupants of the homes they weatherize from lead exposure. DOE requires subgrantees to follow the specified EPA and Occupational Safety and Health Administration (OSHA) standards for worker safety as well as any state or local requirements. By ensuring all weatherization workers are knowledgeable of LSW Minimum Standards (as revised in the 2008 benchmark procedures and curriculum), subgrantees increase the assurance LSW is being followed properly and risks to the workers and/or occupants are minimized. On or after April 22, 2010, agencies and contractors addressing activities that disturb lead-based paint in target homes and child occupied facilities must follow the Environmental Protection Agency's (EPA) Renovation, Repair, and Paint (RRP) Final Rules (Section 402 (c) (3) of TSCA). New crewmembers and contractors are required to be trained within a six-month period. However, they cannot work on a home(s) with lead until becoming a Certified Renovator or being trained on site by a Certified Renovator. Refresher training is required every 5-years.

Pollution Occurrence Insurance (POI) - POI is required to be carried by each subgrantee. See the federal LIWAP website at www.waptac.org for additional information.

Mold and Moisture

Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an

<p>alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.</p>	
<p>Concurrence with WPN11-6 <input checked="" type="checkbox"/> _____ Alternative Guidance _____</p>	<p>Limited water damage repairs can be addressed by weatherization workers and correction of moisture and mold creating conditions are allowed when necessary in order to weatherize the home and to ensure the long term stability and durability of the measures. Where severe mold and moisture issues cannot be addressed, deferral is required.</p>
<p>Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.</p>	
<p>DOE funds may be used.</p>	
<p>Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.</p>	
<p>If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.</p>	
<p>Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.</p>	
<p>Local agencies should ensure that regular weatherization work is performed in a manner that doesn't contribute to mold problems and when the work is performed properly, can alleviate many mold conditions. If a subgrantee determines that a dwelling has an excessive moisture problem, mitigation may be possible if the cause can be eliminated with relatively minor expense. An example would be a broken downspout directing water runoff into a crawl space. Work that threatens the health or safety of WAP crews should not be undertaken. If a mold condition is discovered during the initial inspection of the home by the energy auditor that cannot be adequately addressed by the weatherization crew, then the unit should be referred to the appropriate public or non-profit agency for remedial action.</p>	
<p>Standards for Deferral: Describe when deferral should take place for the specific health and safety category.</p>	
<p>If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.</p>	
<p>Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.</p>	
<p>Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.</p>	
<p>Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.</p>	
<p>Missouri provides a list of training providers, available on the DED website (http://ded.mo.gov/) that subgrantees may choose from, but are not limited to, at their own discretion. This list is updated monthly with available training providers around the state, their contact information, the courses they offer and course schedules. There are several training providers on this listing that offer health and safety courses such as Weatherization Mold and Moisture, etc. All auditors and final inspectors are required to take a Weatherization Mold and Moisture course, or equivalent. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.</p>	
<p>Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.</p>	
<p>Subgrantees will provide client notification and disclaimer on mold and moisture awareness.</p>	
<p>Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.</p>	
<p>Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13-<u>Additional Safety</u>.</p>	
<p>Mold Protocols: Provide a narrative describing protocols for addressing mold found in the client’s homes. The</p>	

protocol should include a method of identifying the presence of mold during the initial audit or assessment, notification to the client, and crew training on how to alleviate mold and moisture conditions in homes.

All homes should be checked for previous or existing moisture problems. Repair of moisture problems that might: 1) result in health problems for the client, 2) damage the structure over the short- or long-term, or 3) diminish the effectiveness of the weatherization measures, must be done before the weatherization job is completed. The moisture assessment section of the Auditor Field Form must be filled out along with special attention to the following:

- a. Evidence of condensation on windows and walls indicated by stains or mold.
- b. Standing water, open sumps, open wells, dirt floors, water stains, etc. in basements. Also, check to see if firewood is stored in the basement and whether laundry is hung to dry during the winter months.
- c. Leaking supply or waste pipes.
- d. Attic roof sheathing shows signs of mold or mildew.
- e. Identification of existing or potential moisture problems shall be documented in the client file.
- f. If existing moisture problems are found, no air sealing should be done unless the source of the moisture can be substantially reduced or effective mechanical ventilation can be added to cost-effectively remove the moisture. In some cases, air sealing must be done in order to reduce the source of the moisture (i.e. sealing off crawlspaces from the house, or sealing attic leakage to eliminate condensation on the roof deck).
- g. Because air tightening may cause an increase in relative humidity, client education should include information about moisture problems and possible solutions.
- h. In the course of weatherization, any low-cost measures that help reduce the humidity levels in the house should be installed. Examples of these activities are venting dryers, venting existing bath or kitchen exhaust fans or installing moisture barriers on dirt floors.
- i. A dwelling that has a CFM50 greater than the Building Airflow Standard (BAS) is no guarantee that moisture will not be a problem in that home.

Occupant Preexisting or Potential Health Conditions

Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. **Note:** Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.

Concurrence with WPN11-6 <input checked="" type="checkbox"/> _____ Alternative Guidance _____	When a person’s health may be at risk and/or the work activities could constitute a health or safety hazard, the occupant at risk will be required to take appropriate action based on severity of risk. Temporary relocation or at-risk occupants may be allowed on a case-by-case basis. Failure or the inability to take appropriate actions must result in deferral.
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Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.

DOE funds may be used.

Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.

If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.

Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. **Note:** Some health and safety categories, like combustion gases, require testing.

A subgrantee should ask clients if they have any health conditions that will be aggravated by the work required to install energy conservation retrofits. Precautions must be taken if the client will be unduly affected by dust, the smell from caulking chemicals or other attributes of the retrofit work so as to contain that part of the process and minimize any adverse effects.

Standards for Deferral: Describe when deferral should take place for the specific health and safety category.

Failure or the inability to take appropriate actions must result in deferral.

Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.

Referral should be made to local community organizations or other sections within the subgrantee organization, if

possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord. Referral to the Missouri Department of Health and Senior Services may be done. Information is available at http://health.mo.gov/index.php .
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.
Missouri provides a list of training providers, available on the DED website (http://ded.mo.gov/) that subgrantees may choose from, but are not limited to, at their own discretion. This list is updated monthly with available training providers around the state, their contact information, the courses they offer and course schedules. There are several training providers on this listing that offer health and safety courses such as OSHA 10, Weatherization Mold and Moisture, etc. Weatherization workers are to be trained, by the subgrantee, on the injury prevention of occupants and weatherization workers and how to handle them properly. The DED technical staff has provided multiple trainings for subgrantees in which they were reminded of health and safety issues, etc. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
Clients shall be provided information of any known risks. Contact information for workers will be provided so that client can inform of any issues.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Occupational Safety and Health Administration (OSHA) and Crew Safety	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u> Alternative Guidance _____	Workers must follow OSHA standards and Material Safety Data Sheets (MSDS) and take precautions to ensure the health and safety of themselves and other workers. MSDS must be posted wherever workers may be exposed to hazardous materials.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category. DOE funds may be used.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP. If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing. OSHA 10 hour is required for all crew level WAP employees. MSDS available on all job sites.	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category. If the weatherization work would put occupants or workers at undue risk, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies. Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral	

may also be made to the landlord.
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.
Missouri provides a list of training providers, available on the DED website (http://ded.mo.gov/) that subgrantees may choose from, but are not limited to, at their own discretion. This list is updated monthly with available training providers around the state, their contact information, the courses they offer and course schedules. There are several training providers on this listing that offer health and safety courses such as OSHA 10. All crew members are required to have OSHA 10.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
N/A
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .
OSHA and MSDS Compliance: Provide a narrative describing procedures for implementation of OSHA and MSDS requirements related to crew and worker safety, how the 10 and 30 hour training requirements will be met, and what the process is for determining if crews are utilizing good safe work practices according to all requirements (EPA, OSHA, etc.).
A subgrantee must comply with Occupational Safety and Health Administration (OSHA) requirements in all weatherization activities that involve staff personnel. Costs for subgrantees to comply with OSHA requirements may be charged under 440.18 as health and safety, tools and equipment, incidental repairs, etc. The cost category selected should be charged consistently throughout the state (from agency to agency) for the same activity. When contractors are employed by subgrantees, those contractors also are required to comply with OSHA. The contractor costs to comply with OSHA, as applicable, are part of the bid price. Work that threatens anyone's health or safety may not be undertaken. Related costs for subgrantees to comply with OSHA requirements may be charged as tools and equipment. Subgrantees are responsible for purchasing all OSHA required tools and equipment and are required to immediately replace any defective tool or equipment. Because of the wide range of activities involved in weatherizing a house, ensuring crew health and safety requires a broad knowledge of the appropriate OSHA requirements. Some of these requirements include, but are not limited to: respirator protection, techniques for safely lifting heavy objects, electrical equipment safety, ladder safety, and general worker protection. OSHA standards should be consulted for further details. Other useful information includes Material Safety Data Sheets that identify potential health risks and describe the proper use, handling, and storage of a wide variety of materials, including some common weatherization materials. They also suggest personal protective equipment and address first aid measures.

Pests	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u> Alternative Guidance _____	Pest removal is allowed only where infestation would prevent weatherization. Infestation of pests may be cause for deferral where it cannot be reasonably removed or poses health and safety concern for workers. Screening of windows and points of access is allowed to prevent intrusion.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to be beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	

Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.
Subgrantees will assess the presence and degree of infestation and risk to workers.
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.
Deferral should be exercised when infestation of pests cannot be reasonably removed or poses health and safety concern for workers and correcting them would be beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.
Basic knowledge of pests and training for weatherization workers, both in-house and contractor is critical to the protection of the Weatherization clients and the workers themselves. Weatherization workers are to be trained, by the subgrantee, on the identification of pests and how to handle them properly. The DED technical staff has provided multiple trainings for subgrantees in which they were reminded of health and safety issues, etc. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
Clients shall be informed of observed conditions and associated risks.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Radon	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 ___X___	Whenever site conditions permit, exposed dirt must be covered with a vapor barrier except for mobile homes. In homes where radon may be present, precautions should be taken to reduce the likeliness of making radon issues worse.
Alterative Guidance _____	
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
DED/DE believes the potential in Missouri for exacerbating radon problems with weatherization work is rather low and does not plan to expend funds for radon testing or mitigation. Missouri has ten northwestern counties in zone 1 which are in the EPA’s high potential for indoor radon levels where testing is allowed as a health and safety expense.	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.	

Deferral should be exercised when existing issues are beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord. Referral to the Missouri Department of Health and Senior Services may be done. Information is available at http://health.mo.gov/index.php .
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.
Radon training for weatherization workers, both in-house and contractor can be critical to the protection of the Weatherization clients and the workers themselves. Weatherization workers are to be trained, by the subgrantee, on what is it, how it occurs, what factors make it worse, weatherization measures that may be helpful and vapor barrier installation. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
Clients shall be provided with the EPA Consumer's Guide to Radon where radon may be present.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Refrigerant

Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is "required" or "not allowed" through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u>	Reclaim refrigerant per Clean Air Act 1990, section 608, as amended by 40 CFR 82, 5/14/93
Alterative Guidance _____	
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
The replacement of air conditioners; approved since 1992, and the approved refrigerator replacements (Weatherization Program Notice 00-05) requires agencies to reclaim refrigerant per Clean Air Act 1990, section 608, as amended by 40 CFR 82, 5/14/93. The appliance vendor, decommissioning center, or other entity recovering the refrigerant must possess EPA-approved section 608 type I or universal certification. Subgrantees should ensure they have appropriate protocols in place that comply with all standards relating to the disposal of the existing appliances.	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.	
Deferral should be exercised when existing issues are beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.	
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.	
Referral should be made to the Environmental Protection Agency. Information can be found at	

http://www.epa.gov/ .
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.
Basic knowledge of refrigerants and training for weatherization workers, both in-house and contractor is critical to the protection of the Weatherization clients and the workers themselves. Weatherization workers are to be trained, by the subgrantee, on the basic knowledge of refrigerants and requirements governed by EPA Section 608.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
Clients are instructed not to disturb refrigerant.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Smoke, Carbon Monoxide Detectors, and Fire Extinguishers	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 ___X___ Alternative Guidance _____	Installation of smoke/CO detectors is allowed where detectors are not present or are inoperable. Replacement of operable smoke/CO detectors is not an allowable cost. Providing fire extinguishers is allowed only when solid fuel is present.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to be beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
CO alarms must be installed in all homes where a furnace return air could back draft a space heater, wood stove, fireplace or water heater. CO alarms should also be installed in homes which have attached garages. Smoke detectors should be in every home and should be installed if not present in a home receiving weatherization services. Smoke alarms should be installed near combustion zones and near bedrooms. Refer to the Missouri Weatherization Field Guide for additional detail on installation and consult manufacturer’s recommendations. Reference in Missouri WAP Operational Manual 3. I. B.	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.	
Deferral should be exercised when existing issues are beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.	
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.	
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord. Referral to the Missouri Department of Public Safety and local Fire Chief may also be considered.	
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.	
Missouri provides a list of training providers, available on the DED website (http://ded.mo.gov/) that subgrantees may choose from, but are not limited to, at their own discretion. This list is updated monthly with available training providers around the state, their contact information, the courses they offer and course schedules. Weatherization	

workers are to be trained, by the subgrantee, on the installation of smoke alarms, carbon monoxide detectors and fire extinguishers and how to handle them properly. The DED technical staff has provided multiple trainings for subgrantees in which they were reminded of code compliance issues, etc. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
Clients shall be provided with verbal and written information on use of smoke/CO detectors and fire extinguishers where allowed.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .
Smoke/CO Detector Installation: Provide a narrative describing smoke/CO Detector installation parameters and procedures.
CO alarms must be installed in all homes where a furnace return air could back draft a space heater, wood stove, fireplace or water heater. CO alarms should also be installed in homes which have attached garages.
Smoke detectors should be in every home and should be installed if not present in a home receiving weatherization services. Smoke alarms should be installed near combustion zones and near bedrooms. Refer to the Missouri Weatherization Field Guide for additional detail on installation and consult manufacturer’s recommendations. Reference in Missouri WAP Operational Manual 3. I. B.

Solid Fuel Heating (Wood Stoves, etc.)	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u>	Maintenance, repair, and replacement of primary indoor heating units is allowed where occupant health and safety is a concern. Maintenance and repair of secondary heating units is allowed.
Alternative Guidance	
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to be beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
The wood stove should be fired after the blower door testing is complete. With the stove operating, check around the solid-fuel appliances for carbon monoxide (CO) emissions. If there are any indications of CO leaking from the stove into the ambient air, repairs should be made to correct the problem. Weatherization should not proceed until appropriate repairs are made allowing safe operation of the stove or fireplace.	
Maintenance, repair, and replacement of a primary indoor solid fuel heating units is allowed where occupant health and safety is a concern. Maintenance and repair of secondary solid fuel heating units is allowed as a health and safety measure. Replacement of a secondary solid fuel heating unit is not allowed.	
All venting systems and installations shall comply with the latest edition of NFPA 211, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances.	

Fire extinguishers may be installed where the client is using a solid fuel source of heat such as wood, pellets, etc.
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.
Deferral should be exercised when existing issues are beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.
Basic knowledge of fire hazards and training for weatherization workers, both in-house and contractor is critical to the protection of the Weatherization clients and the workers themselves. Weatherization workers are to be trained, by the subgrantee, on the proper on the identification of fire hazards and how to handle them properly. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
The client shall be notified of any unsafe conditions and provided safety information including recognizing depressurization.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Space Heaters, Stand Alone Electric

Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u>	Repair, replacement or installation is not allowed. Removal is recommended.
Alterative Guidance _____	
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may not be used, except for incidental repairs.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
Check circuitry to ensure adequate power supply for existing space heaters.	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.	
Deferral should be exercised when existing issues are beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.	
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.	
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.	
Training Provision: Discuss how training will be provided for the specific health and safety category. Note:	

Some health and safety categories, like OSHA, require training.
Basic knowledge of fire hazards and training for weatherization workers, both in-house and contractor is critical to the protection of the Weatherization clients and the workers themselves. Weatherization workers are to be trained, by the subgrantee, on the proper on the identification of fire hazards and how to handle them properly. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
The client shall be informed of hazards and a signed waiver if removal is not allowed.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Space Heaters, Unvented Combustion	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u> Alternative Guidance _____	Removal is required, except as secondary heat where the unit conforms to ANSI Z21.11.2. Units that do not meet ANSI Z21.11.2 must be removed prior to weatherization but may remain until a replacement heating system is in place.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
Testing for air-free carbon monoxide is allowed. Check units for ANSI Z21.11.2 label.	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.	
Deferral should be exercised when existing issues are beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.	
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.	
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.	
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.	
Missouri provides a list of training providers, available on the DED website (http://ded.mo.gov/) that subgrantees may choose from, but are not limited to, at their own discretion. This list is updated monthly with available training providers around the state, their contact information, the courses they offer and course schedules. There are several training providers on this listing that offer health and safety courses such as Combustion Safety, Supplemental CAZ Testing, HVAC Service Technician, HVAC Installation, etc. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.	
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health	

and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.
The client shall be informed of dangers of unvented space heaters: CO, moisture, NO2, CO can be dangerous even if CO alarm does not sound.
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .

Space Heaters, Vented Combustion	
Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. Note: Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u> Alternative Guidance _____	Shall be treated as furnaces
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used.	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to be beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
Venting should be tested consistent with furnaces, see heating system guidance above.	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.	
Deferral should be exercised when existing issues are beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.	
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.	
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.	
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.	
Missouri provides a list of training providers, available on the DED website (http://ded.mo.gov/) that subgrantees may choose from, but are not limited to, at their own discretion. This list is updated monthly with available training providers around the state, their contact information, the courses they offer and course schedules. There are several training providers on this listing that offer health and safety courses such as Combustion Safety, Supplemental CAZ Testing, HVAC Service Technician, HVAC Installation, etc. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.	
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.	
Clients shall be given all pertinent information on the appropriate use and maintenance of heating systems and the proper disposal of hazardous materials such as fuel..	
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.	
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .	

Spray Polyurethane Foam (SPF)

Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. **Note:** Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.

Concurrence with WPN11-6 <input checked="" type="checkbox"/>	Use EPA recommendations (available online at http://www.epa.gov/dfepubs/projects/spf/spray_polyurethane_foam.html) when working within the conditioned space or when SPF fumes become evident within conditioned space. When working outside the building envelope, isolate the area where foam will be applied, take precautions so that fumes will not transfer to inside conditioned space, and exhaust fumes outside the home.
Alternative Guidance _____	

Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.

DOE funds may be used.

Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.

If the issue is determined to be beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.

Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. **Note:** Some health and safety categories, like combustion gases, require testing.

Check for penetrations in the building envelope. Sensory inspection inside the home for fumes during foam application.

Standards for Deferral: Describe when deferral should take place for the specific health and safety category.

Deferral should be exercised when existing issues are beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.

Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.

Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.

Training Provision: Discuss how training will be provided for the specific health and safety category. **Note:** Some health and safety categories, like OSHA, require training.

Basic knowledge of SPF and training for weatherization workers, both in-house and contractor is critical to the protection of the Weatherization clients and the workers themselves. Weatherization workers are to be trained, by the subgrantee, on the proper on the use of SPF and how to handle it properly, along with proper use of MSDS.

Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. **Note:** Some health and safety categories, like mold and moisture, require client education.

The client shall be provided notification to the client of plans to use two-part foam and the precautions that may be necessary.

Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.

Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13-Additional Safety.

Ventilation

Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. **Note:** Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.

<p>Concurrence with WPN11-6 <input checked="" type="checkbox"/> <u> </u> Alternative Guidance _____</p>	<p>ASHRAE 62.2-2013, with inclusion of Addenda b, is required to be met to the fullest extent possible, when performing weatherization activity. Implementing ASHRAE 62.2 is not required where acceptable indoor air quality already exists as defined by ASHRAE 62.2 or when the exceptions listed below are met.</p>
<p>Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.</p>	
<p>DOE funds may be used.</p>	
<p>Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.</p>	
<p>If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.</p>	
<p>Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.</p>	
<p>ASHRAE 62.2 evaluation, fan flow and follow up testing are required to ensure compliance.</p>	
<p>Standards for Deferral: Describe when deferral should take place for the specific health and safety category.</p>	
<p>Deferral should be exercised when existing issues are beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.</p>	
<p>Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.</p>	
<p>Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.</p>	
<p>Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.</p>	
<p>Missouri provides regional and on-site training upon request for the ASHRAE 62.2 standards. Missouri requires at least one staff at each subgrantee to be trained in the technical standards to meet ASHRAE 62.2 requirements. A listing of training providers for health and safety classes is posted on the Missouri weatherization web site for all subgrantees to access. Missouri also requires each agency to have a BPI certified Building Analyst, which has health and safety criteria and requires recertification every three years. Additionally, all homes completed as of July 1, 2015 must have a final inspection performed by a certified Quality Control Inspector.</p>	
<p>Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.</p>	
<p>The client shall be provided with information on function, use and maintenance of ventilation systems and components. Include disclaimer the ASHRAE 62.2 does not account for high polluting sources or guarantee indoor air quality.</p>	
<p>Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.</p>	
<p>Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13-<u>Additional Safety</u>.</p>	
<p>ASHRAE 62.2 Compliance: Provide a narrative describing implementation of ASHRAE 62.2, which will be required during the 2015 program year. Grantees must provide justification if making changes to AHRAE 62.2 specific to their housing stock and local considerations.</p>	
<p>Ordered complete and most current copy of ASHRAE 62.2 for training purposes and make information available to sub-grantees. Update technical standards to meet ASHRAE 62.2 requirements. All homes audited after July 1, 2015 will be required to comply with ASHRAE 62.2-2013 standards, with inclusion of ASHRAE 62.2-2013 Addenda b.</p>	
<p>All installed mechanical ventilation will be required to follow the guidelines of ASHRAE 62.2.</p>	

Window and Door Replacement, Window Guards

Concurrence or Alteration: Check if you concur with existing guidance from WPN 11-6 or if you are using an alternative Action/Allowability. Include the guidance from WPN 11-6 or alternative guidance in the space provided. Alternatives must be explained and comply with DOE guidance. **Note:** Where an Action/Allowability or Testing is “required” or “not allowed” through WPN 11-6, the grantee must concur or choose to defer all units where the

specific issue is encountered. Allowable items under WPN 11-6 leave room for determining if the issue or testing will be addressed and in what circumstances.	
Concurrence with WPN11-6 <u> X </u> Alternative Guidance	Replacement, repair, or installation is not an allowable health and safety cost but may be allowed as an incidental repair or an efficiency measure if cost justified.
Funding: State that DOE funds are being used or indicate that alternate funding sources will be used to address this particular health and safety category.	
DOE funds may be used per above stipulations	
Beyond Scope of DOE WAP: Describe how the issue will be treated if beyond the scope of DOE WAP.	
If the issue is determined to beyond the scope of the DOE WAP, subgrantees will defer the work and refer the client to other resource agencies who may be able to address the problem. Refer to the deferral section above for additional deferral criteria.	
Standards for Remedy: Describe the standards for remedy of the health and safety category, including testing protocols. Also include when partial weatherization would be appropriate. Note: Some health and safety categories, like combustion gases, require testing.	
N/A	
Standards for Deferral: Describe when deferral should take place for the specific health and safety category.	
Deferral should be exercised when existing issues are beyond the scope of the DOE WAP. For additional deferral criteria, see deferral policy above.	
Standards for Referral: Describe when referral should take place for the specific health and safety category. If possible, include associated referral agencies.	
Referral should be made to local community organizations or other sections within the subgrantee organization, if possible, when problems are identified that are beyond the scope of the DOE WAP. If the client is a renter referral may also be made to the landlord.	
Training Provision: Discuss how training will be provided for the specific health and safety category. Note: Some health and safety categories, like OSHA, require training.	
Weatherization workers are to be trained, by the subgrantee, on the proper rules and guidelines regarding doors and windows.	
Client Education: Discuss what specific steps will be taken to educate the client, if any, on the specific health and safety category if this is not explained elsewhere in the State Plan. Note: Some health and safety categories, like mold and moisture, require client education.	
The client shall be provided information on lead risks.	
Disposal Procedures: Provide disposal procedures or indicate where these procedures can be found in the Plan or Field Standards.	
Disposal procedures can be found in the Missouri Operations Manual Section 3, Subsection I, Part B, 13- <u>Additional Safety</u> .	

V.8.3 Monitoring Activities (PY2015)

I. INTRODUCTION

The State of Missouri historically has administered the Weatherization Assistance Program (WAP) through a supervised network of nonprofit Subgrantee agencies. The State may procure new implementation subgrantees as described elsewhere in this document. As the granting agency for the statewide program, the DED/DE is responsible for monitoring the performance of each WAP Subgrantee.

DED/DE conducts a fiscal/procedural risk assessment each year for all subgrantees to determine the percentage of client files that will be reviewed during the upcoming monitoring year. Based on the risk assessment, fiscal/procedural monitors will review a minimum of 5% of the client files of each of the subgrantee homes that they completed during that year (or a minimum of 10 client files, whichever is greater). For medium risk subgrantees a minimum of 9% of the client files of each of the subgrantee homes that they completed during that year will be reviewed (or a minimum of 15 client files, whichever is greater). For high risk subgrantees a minimum of 18% of the client files of each of the subgrantee homes that they completed during that year will be reviewed (or a minimum of 20 client files, whichever is greater). Every subgrantee is monitored at least once in the program year.

DED/DE conducts a technical risk assessment each year for all subgrantees, which determines the percentage of homes that will be inspected during the upcoming monitoring year. Based on the risk assessment, for subgrantees assessed as low risk, technical monitors will inspect a minimum of 5% of each of the subgrantee homes that they completed during that year. For subgrantees assessed as medium risk, technical monitors will inspect a minimum 7.5% of each of the subgrantee homes that they completed during that year. For subgrantees assessed as high risk, technical monitors will inspect a minimum 10% of each of the subgrantee homes that they completed during that year. For subgrantees where the auditor performs both the initial audit and final quality control inspection, as described in WPN 15-4 Section 3, the technical monitors will inspect a minimum of 10% of each of the subgrantee homes that they complete during that year. Technical monitors also inspect initial audits, homes in progress and final inspections being performed by subgrantee staff during technical monitoring visits, when applicable. Technical monitoring visits are conducted twice per year for each subgrantee. One half of the total number of homes to be inspected for the year is inspected during each monitoring visit. All subgrantee final inspections as well as grantee technical monitoring for completed homes reported in Program Year 2015, and beyond, will be performed by a certified Quality Control Inspector as outlined in WPN 15-4 Section 3.

A. Monitoring Procedure

Monitoring enables DED/DE to determine if the residents of Missouri are being adequately served and if the WAP is being operated in compliance with the

federal/state regulations and requirements. Information obtained by the monitoring effort is used to determine:

- Internal controls and processes used by subgrantees
- Types of training and technical assistance required
- Fiscal integrity of subgrantees
- Production rates
- Proactive measures that may be taken to improve program operations
- Compliance with federal/state regulations and requirements
- Quality of weatherization work performed on clients homes
- Programmatic and Management Monitoring
 - Subgrantee Review
 - Subgrantees are reviewed through desk reviews and on-site monitoring visits.
 - Financial/Administrative
 - Desk reviews are conducted on an on-going basis through monthly reports of expenditures; clients served, and completed homes.
 - On-site reviews are held at least once each program year to review procedural, fiscal, technical and compliance issues.
 - Annual independent audits are reviewed to ensure audited financial schedules match financial reports during the year.
 - Equipment/Inventory/Materials
 - An annual equipment inventory is required. Equipment and vehicles are reportable with a cost equal to or greater than \$5,000.
 - Eligibility
 - Eligibility is reviewed during through desk reviews and on-site visits. Any issues of in-eligibility are deducted from future reimbursements.
 - Rental
 - Landlord agreement forms (if applicable) are reviewed to determine authorization from the client's landlord.
 - Landlord proof of income documentation (if applicable) is reviewed to determine the landlord contribution.
 - Feedback and Reporting
 - Monitoring reports are issued with findings and recommendations.
 - Follow-up action as a result of the monitoring report is due within 30 days for fiscal/procedural and 45 days for technical.
 - Energy Audits
 - Energy audits, including on-site evaluations and computerized audits, are reviewed during on-site technical monitoring visits and through desk reviews.
 - Field Work
 - Field work is reviewed during on-site technical monitoring visits.
 - Health & Safety
 - A limit for the average cost per home for Health & Safety costs is twenty percent (20%) of expenditures.

- Installed health and safety measures are reviewed for proper installation
 - Homes monitored are reviewed for any health and safety measures that were not appropriately addressed.
 - Quality Assurance
 - Quality assurance is reviewed on-site during technical monitoring and by tracking subgrantee field inspectors reoccurring issues.
 - Training and Technical Assistance
 - Required technical training is of personnel is review on-site during monitoring.
 - Training and Technical Assistance expenditures are reviewed via desk reviews through monthly reports of expenditures; clients served, and completed homes.
 - Staff or entity performing the monitoring
 - DED/DE staff or contract monitors on behalf of the DED/DE perform the monitoring.
 - How monitoring results are handled and required follow-up procedures
 - Corrective action plans from the subgrantees are required based upon findings from monitoring reports.
 - Required actions noted within the monitoring reports are required to be performed by the subgrantees lest future funding be withheld.
 - Follow-up action as a result of the monitoring report is due within 30 days for fiscal/procedural and 45 days for technical.
- Subgrantee Monitoring
 - Program Overview (Client File Review, Work Orders, etc.)
 - Client Files are reviewed for the following documents: weatherization application, proof of income, re-verification of income (if applicable), proof of ownership, landlord agreement (if applicable), landlord proof of income (if applicable), NEAT or MHEA audit data, invoices, bills for materials and labor charges, work orders/estimates, recommended measures, utility bills, photos, work order changes, date of energy audit, date of final inspection, etc.
 - Annual household income is recalculated to determine compliance with Federal requirements for eligibility.
 - County statistics are reviewed to determine whether all areas are served equally based on population and poverty numbers.
 - Average cost per home is calculated and reviewed.
 - Financial/Administration
 - Subgrantees have appropriate insurance coverage for their agency and their personnel
 - Inventory
 - Materials inventory is valued using the First In First Out (FIFO) inventory valuation method.
 - Energy Audits

- Energy audits, including on-site evaluations and computerized audits, are reviewed during on-site technical monitoring visits and through desk reviews.
 - Qualifications & Training
 - Required training and certifications of subgrantee staff are evaluated on-site and through desk monitoring.
 - Weatherization of Units
 - Work performed on-site is reviewed during technical monitoring visits.
 - Health and Safety
 - A limit for the average cost per home for Health & Safety costs is twenty percent (20%) of expenditures.
 - Installed health and safety measures are reviewed for proper installation
 - Homes monitored are reviewed for any health and safety measures that were not appropriately addressed.
 - In Progress
 - Homes in progress are reviewed on-site during technical monitoring visits.
 - Final Inspections
 - Final inspections are reviewed on-site during technical monitoring visits and through desk monitoring.
 - Staff or entity performing the monitoring
 - DED/DE staff or contract monitors on behalf of the DED/DE perform the monitoring.
 - How monitoring results are handled and required follow-up procedures
 - Corrective action plans from the subgrantees are required based upon findings from monitoring reports.
 - Required actions noted within the monitoring reports are required to be performed by the subgrantees lest future funding be withheld.
 - Follow-up action as a result of the monitoring report is due within 30 days for fiscal/procedural and 45 days for technical.
- Financial Monitoring
 - Financial Management/Accounting Systems and Operations
 - Subgrantee has accounting policies and procedures.
 - Bank reconciliations are performed in a timely manner.
 - Advance funding is deposited into an insured, interest bearing account.
 - Weatherization costs trace to the general ledger.
 - Weatherization reimbursements from DED trace to the general ledger.
 - Audits
 - Follow-up of prior monitoring concerns.
 - Single Audit was performed by an independent auditor and prior audit concerns, if any, were addressed.

- Payroll/Personnel
 - Crew labor is traced to timesheets.
 - Contract labor is traced to the contractor's invoice.
- Vehicles and Equipment
 - All vehicles require both DOE and DED/DE approval before the vehicle may be purchased.
 - Subgrantee completes and submits the Vehicle and Equipment Inventory Report by December 1 of each year.
 - Subgrantee completes and submits the Equipment/Vehicle Disposal Report no later than 90 days from the DED/DE disposal approval letter.
 - Subgrantee completes and submits the Vehicle/Equipment/Building Purchase, Lease Request form for any leases, if applicable.
- Procurement
 - Subgrantee procurement requirements are met per Section VI of the Weatherization Operations Manual.
- Sub-awards/Subgrantee Monitoring
 - Desk reviews are conducted on an on-going basis through monthly reports of expenditures; clients served, and completed homes.
 - Annual independent audits are reviewed to ensure audited financial schedules match financial reports during the year.
- Invoicing
 - Materials, contract labor, crew labor and incidental repair costs per the client file match invoices and work orders in the client file.
- Records Retention
 - All records are kept for three years.
- Staff or entity performing the monitoring
 - DED/DE staff or contract monitors on behalf of the DED/DE perform the monitoring.
- How monitoring results are handled and required follow-up procedures
 - Corrective action plans from the subgrantees are required based upon findings from monitoring reports.
 - Required actions noted within the monitoring reports are required to be performed by the subgrantees lest future funding be withheld.
 - Follow-up action as a result of the monitoring report is due within 30 days for fiscal/procedural and 45 days for technical.

B. Tentative Monitoring Schedule

Each subgrantee has fiscal monitoring occur once a year and technical monitoring occur twice a year. Below is a tentative monitoring schedule for PY14.

Subgrantee # From Annual File	Subgrantee Acronym	Fiscal Monitoring*	Technical Monitoring Visit 1*	Technical Monitoring Visit 2*
1	CSI	1/26/2016	9/28/2015	3/7/2016
2	DAEOC	5/11/2016	11/9/2015	4/11/2016

3	EMAA	4/7/2016	10/19/2015	3/22/2016
5	ESC	6/22/2016	8/30/2015	2/1/2016
6	GHCAA	7/28/2016	9/8/2015	2/8/2016
7	CMCA	2/17/2016	10/26/2015	3/28/2016
8	ULMSL	8/25/2016	11/30/2015	4/25/2016
9	JFCAC	4/5/2016	12/14/2015	5/9/2016
11	CAASTLC	5/19/2016	11/2/2015	4/4/2016
12	MOCA	3/17/2016	10/12/2015	3/14/2016
13	MVCAA	2/10/2016	10/19/2015	3/21/2016
14	NECAC	7/7/2016	9/28/2015	2/29/2016
15	NMCAA	4/5/2016	9/14/2015	2/15/2016
16	OAI	4/28/2016	9/21/2015	2/22/2016
17	OACAC	7/21/2016	12/7/2015	5/2/2016
18	SCMCAA	5/9/2016	11/9/2015	4/11/2016
19	WCMCAA	8/25/2016	9/8/2015	2/8/2016
35	CAPSTJOE	1/28/2016	10/5/2015	3/7/2016
36	USCAA	8/25/2016	11/16/2015	4/18/2016

* Dates are tentative and visits are for the week of the date.

II. PROBLEM RESOLUTION:

A variety of problems may arise during the course of a program year which may require different methods of resolution. Most problems can be placed into one of four categories:

1. Reporting

Reporting problems can generally be resolved using written communication explaining the problem. Where the problem is significant, an on-site visit will be made to gather the correct data and assist the Subgrantee in developing better reporting procedures.

2. Housing Quality

A housing quality problem may be noticed during a field visit. Where significant problems are found in the workmanship on the home, the Subgrantee will be required to return to the home(s) and correct the problem. Where a problem is found to be widespread, the Subgrantee will be required to notify DED/DE of the resolution to the problem following procedures as defined in the Weatherization Program Operational Manual. This may include informal or formal staff training.

3. Safety

For safety issues, the Subgrantee will be required to correct all deficient work and to re-inspect all completed homes with similar concerns, providing routine updates to DED/DE until all concerns are corrected. DED/DE will re-inspect to verify that corrections have been made either through an on-site inspection or by telephone contact with clients.

4. Fiscal Compliance

DED/DE will require subgrantees to take corrective action when a Subgrantee is not in compliance with the federal and state requirements. The action taken will depend upon the nature of the problem. If, for example, a problem involves a disallowed cost, the Subgrantee will be required to repay DED/DE. DED/DE will require the Subgrantee to provide documented evidence of corrective action(s) when DED/DE has determined that the Subgrantee is not in compliance. DED/DE will monitor subgrantee implementation of corrective actions during annual on-site monitoring visits.

The processes that DED/DE follows for the discipline and/or removal of a subgrantee from the program are outlined in the Weatherization Program Operational Manual, Section 1, Subsection V and Subsection VI.

III. IMPROVEMENTS BASED ON PAST YEARS' EXPERIENCES

The Weatherization Assistance Program will continue to be upgraded to keep current with new accepted technology and improved ways of conducting business such as pressure diagnostics testing, use of infrared camera in the field, BPI certifications and NREL JTAs.

IV. QUALITY CONTROL MEASURES

A. Statewide Requirements

1. Inspections

See the Missouri WAP Grantee Master File V.5.3.

2. Work Measures

See the Missouri WAP Grantee Master File V.5.1.

B. Purchasing Controls

1. Materials Specifications 10 CFR 440 Appendix A (Revised)

Each Subgrantee is required to specify material standards in their bid documents. Materials are required to meet or exceed standards specified in the most current 10 CFR Part 440 Appendix A and the Missouri WAP material standards list. DED/DE requires all materials have a long term life expectancy, if applicable. Missouri Subgrantees require that vendors submit certification documentation for all major weatherization materials such as insulation and storm windows. Bid and contract documents are reviewed by DED/DE.

2. Materials Purchasing Standards

Standards for competitive bidding are detailed in the Weatherization Program Operational Manual; Procurement Section.

C. On-Site or Local Controls

1. Responsibility for Post-Work Inspections

DED/DE monitoring staff reviews the homes completed for each Subgrantee for compliance with either the Independent QCI or Independent Auditor/QCI as outlined in WPN 15-4 Section 3 DOE Prescribed QCI Policy.

2. Accuracy of Work Orders and Inspections

The Subgrantee Quality Control Inspectors are required to assure that proper work priorities were followed and that the work has been properly performed. DED/DE monitoring staff will review the process. A Subgrantee having problems will first be provided more technical assistance. Continued problems will result in further steps beginning with disqualification of Subgrantee inspectors and ending with the subgrantee loss of DED/DE funding. DED/DE will implement this provision to emphasize the importance of completing work in a cost-effective and quality manner.

V. MONITORING REPORTS

DED/DE will submit a monitoring report (fiscal/procedural and technical) to the subgrantee within 30 days of a monitoring visit. For subgrantee fiscal/procedural monitoring reports that contain recommendations that require implementation, DED/DE requires that the subgrantee submit a corrective action plan within 30 days of receipt of the report. For subgrantee technical monitoring reports that contain recommendations that require implementation, DED/DE requires that the subgrantee submit a corrective action plan within 45 days of receipt of the report. All corrective actions are reviewed for implementation during the subsequent fiscal/procedural or technical monitoring visit.

DED/DE will report progress to DOE using the following method:

A. Submitting an Annual/Project Summary Report

The annual/project summary report documents the following:

- Number and types of monitoring visits scheduled and completed
- Significant findings
- Findings status
- Significant corrective actions
- Current management issues
- Assistance needs

An annual summary report will be provided to DOE giving an overview of the year end and the status of activities that were planned.

VI. STAFFING FOR MONITORING ACTIVITIES

DED/DE staff are listed below by title and should correlate to the personnel section of the SF424A. Please note, this will not completely match the SF424A as not all positions or personnel services are utilized for monitoring activities.

Environmental Manager B2: Procedural/Fiscal Monitor and Monitoring Report Approval, Technical Monitoring Report Approval - **Grantee T&TA, 20% and Grantee Admin, 10% for this application**

Management Analysis Specialist I: Procedural/Fiscal Monitor (incl. payment desk monitoring) - **Grantee T&TA, 20% and Grantee Admin, 25% for this application**

Energy Specialist IV (Procedural): Procedural/Fiscal Monitor and Monitoring Report Reviewer and Approval - **Grantee T&TA, 50% and Grantee Admin, 20% for this application**

Environmental Specialist III: Technical Monitoring, Building Performance Institute (BPI) Quality Control Inspector; BPI Building Analysts Professional; BPI Envelope Professional; EPA Certified Renovator; National Environmental Health Association Health Homes Specialist; Energy Related Mold and Moisture training - **Grantee T&TA, 80% for this application**

Environmental Specialist II: Technical Monitoring, Building Performance Institute (BPI) Quality Control Inspector; BPI Building Analysts Professional; EPA Certified Renovator; National Environmental Health Association Health Homes Specialist- **Grantee T&TA, 80% for this application**

Energy Specialist IV (Technical): Technical Monitoring, Building Performance Institute (BPI) Quality Control Inspector; BPI Building Analysts Professional; BPI Envelope Professional; EPA Certified Renovator; National Environmental Health Association Health Homes Specialist; Energy Related Mold and Moisture training - **Grantee T&TA, 80% for this application**

Energy Specialist III: Procedural/Fiscal Monitor (including desk review of payment submissions and reports) - **Grantee T&TA, 45% and Grantee Admin, 15% for this application**

Energy Specialist II: Procedural/Fiscal Monitor (including desk review of payment submissions and reports) - **Grantee T&TA, 80% and Grantee Admin, 5% for this application**

Auditor I/II: Procedural/Fiscal Monitor (incl. payment desk monitoring) - **Grantee T&TA, 65% and Grantee Admin, 2% for this application**

Account Clerk II: Fiscal Monitor (incl. payment desk monitoring) - **Grantee Admin, 5% and Grantee T&TA, 15% for this application**

Fiscal & Administrative Manager: Procedural/Fiscal Monitoring – **Grantee Admin, 5% and Grantee T&TA, 20% for this application**

Administrative Office Support Assistant: Misc. monitoring/report writing duties - **Grantee Admin, 5% and Grantee T&TA, 5% for this application**

Deputy Director: Misc. monitoring duties - **Grantee T&TA, 5% for this application**