### IV.1 Subgrantees

<table>
<thead>
<tr>
<th>Subgrantee (City)</th>
<th>Planned Funds/Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrowhead Economic Opportunity Agency, Inc. (Virginia)</td>
<td>$645,135.20</td>
</tr>
<tr>
<td>B* County Community Action program, Inc. (Bemidji)</td>
<td></td>
</tr>
<tr>
<td>Community Action Partnership of Ramsey &amp; Washington Counties (Saint Paul)</td>
<td>$1,297,158.08</td>
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<tr>
<td>Dakota County Community Development Agency (Eagan)</td>
<td>$484,316.48</td>
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<tr>
<td>Fond Du Lac Reservation Business Committee (Cloquet)</td>
<td>$33,227.64</td>
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<tr>
<td>Inter-County Community Council (Oklee)</td>
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<tr>
<td>KOOTASCA Community Action, Inc. (Grand Rapids)</td>
<td>$208,269.02</td>
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<tr>
<td>Lakes and Pines Community Action Council, Inc. (Mora)</td>
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<td>Mahube-OTWA Community Action Partnership, Inc. (Detroit Lakes)</td>
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<tr>
<td>Mille Lacs Band of Ojibwe Indians (Onamia)</td>
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<td>Minnesota Valley Action Council (Mankato)</td>
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<td>Southwestern Minnesota Opportunity Council, Inc. (Worthington)</td>
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<td>Sustainable Resources Center (Minneapolis)</td>
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<td>Three Rivers Community Action, Inc. (Zumbrota)</td>
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<td>Tri-County Action Programs, Inc. (SC) (Waite Park)</td>
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<td>Tri-County Community Action, Inc. (LF) (Little Falls)</td>
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<td>United Community Action Partnership (Marshall)</td>
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<td>West Central Minnesota Communities Action, Inc. (Elbow Lake)</td>
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<td>White Earth Reservation Tribal Council (Waubun)</td>
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<tr>
<td>Wright County Community Action, Inc. (Maple Lake)</td>
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<td><strong>Total:</strong></td>
<td><strong>$9,419,165.00</strong></td>
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_(Grant Number: EE0009910, State: MN, Program Year: 2022)_
IV.2 WAP Production Schedule

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

<table>
<thead>
<tr>
<th>Weatherization Plans</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Total Units (excluding reweatherized)</td>
<td>695</td>
</tr>
<tr>
<td>Reweatherized Units</td>
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</table>

Average Unit Costs, Units subject to DOE Project Rules

<table>
<thead>
<tr>
<th>VEHICLE &amp; EQUIPMENT AVERAGE COST PER DWELLING UNIT (DOE RULES)</th>
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</thead>
<tbody>
<tr>
<td>A Total Vehicles &amp; Equipment ($5,000 or more) Budget</td>
</tr>
<tr>
<td>B Total Units Weatherized</td>
</tr>
<tr>
<td>C Total Units Reweatherized</td>
</tr>
<tr>
<td>D Total Dwelling Units to be Weatherized and Reweatherized (B + C)</td>
</tr>
<tr>
<td>E Average Vehicles &amp; Equipment Acquisition Cost per Unit (A divided by D)</td>
</tr>
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</table>

AVERAGE COST PER DWELLING UNIT (DOE RULES)

| F Total Funds for Program Operations | $5,565,320.00 |
| G Total Dwelling Units to be Weatherized and Reweatherized (from line D) | 695 |
| H Average Program Operations Costs per Unit (F divided by G) | $8,007.65 |
| I Average Vehicles & Equipment Acquisition Cost per Unit (from line E) | $0.00 |
| J Total Average Cost per Dwelling (H plus I) | $8,007.65 |

IV.3 Energy Savings

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

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<th>Units</th>
<th>Savings Calculator (MBtus)</th>
<th>Energy Savings</th>
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<tbody>
<tr>
<td>This Year Estimate</td>
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<td>29.3</td>
</tr>
<tr>
<td>Prior Year Estimate</td>
<td>1196</td>
<td>29.3</td>
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<tr>
<td>Prior Year Actual</td>
<td>468</td>
<td>29.3</td>
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Method used to calculate savings description:

IV.4 DOE-Funded Leveraging Activities

PY2022 MINNESOTA WEATHERIZATION ASSISTANCE PROGRAM

STATE LEVERAGING PLAN

Minnesota's leveraging activities for PY22 will build and expand on the PY21 Minnesota Leveraging Plan.

Minnesota Goals:

Minnesota's leveraging plan is built around seeking funding to support three specific goals:

1. Expand the number of income-qualified households receiving weatherization services;
2. Reduce deferrals by remediating household conditions which would require deferral under the Weatherization Assistance Program (WAP) rules; this “Pre-Weatherization” work will expand the number of households eligible to receive weatherization services;
3. Add Weatherization-Plus activities to provide weatherized households with additional services, while on-site, to increase the health and safety of the home environment for WAP households (both directly and through decarbonization of housing) over and above the energy-related measures currently provided by WAP.

While aligned with the training plan, a fourth goal of leveraging funds is to develop a workforce pipeline to support the growth and stabilization of ongoing weatherization activities.
Expanded Services: Minnesota WAP has served 12% of all income-eligible households in Minnesota since 2005. Two key contributors of this are: 1) lack of base and consistent funding, and 2) household-based deferrals. To address the first, Leveraging activities will include the ongoing pursuit of additional funding through federal, state, utility, and other sources to increase and develop a solid, ongoing, base funding level.

Pre-Weatherization activities: Pre-weatherization activities are deferral mitigation activities. Minnesota WAP currently has a ~50% deferral rate; households deferred cannot receive weatherization until the deferral condition is remediated. With the cost of remediation and the income level of those households that are eligible, addressing the reasons for deferral by the household rarely happens. Therefore, USDOE WAP funds are currently spent to recruit and audit households which do not end up receiving weatherization services. By undertaking Pre-Weatherization activities, deferral conditions will be remediated and allow the household to remain eligible for WAP services.

Examples of measures that Pre-Weatherization funding will support include structural issues (roofing, foundation cracks, etc.), mold and moisture issues, asbestos remediation, etc. By funding deferral remediation work, not only will additional low-income Minnesotans receive weatherization services, but USDOE funds spent on administrative costs and auditing the household will not become lost costs, as the household remains in queue for weatherization. Minnesota will continue to pursue or more deeply utilize various funding opportunities to augment the newly authorized DOE Weatherization Readiness Fund, the EAPWX Transfer funds, and the utility Conservation Improvement Program (CIP) pre-weatherization funding authorized under Minnesota’s ECO Act of 2021.

Weatherization-Plus Activities: Weatherization-Plus activities center on expanding the “menu” of in-home measures WAP service providers are able to provide to meet the specific needs of WAP clients. Funding for Weatherization-Plus related activities will allow the pursuit of funding or partnerships to implement enhanced health and safety, as well as decarbonization measures, focusing on the following programs:

- Indoor Air Quality programs: lead, radon, vermiculite reduction;
- Removing triggers (mold and moisture, rodents and pests, etc.) known to negatively affect asthma, other respiratory illnesses, and other chronic diseases;
- Aging-In-Place programs, to keep the elderly safe and healthy at home;
- Remain-in-Place programs, to provide accessibility modifications for disabled persons; and
- Electrification-Ready/Decarbonization funding to enhance weatherization services

Increasing Equity-Based Program Access

The Weatherization Assistance Program is managed by the Energy Equity Programs team within Minnesota’s State Energy Office. Minnesota will approach goal attainment (for the above-referenced goals) by focusing on improving the delivery of services to categories of clients where a historical Equity Gap exists.

Minnesota prioritizes WAP households for service according to the five priority categories as defined by the U.S. DOE 1) Children, 2) Elderly, 3) Persons with disabilities, 4) High energy use, 5) High energy burden, with many WAP-eligible households possessing more than one of these categories, and almost all households having at least one priority category. The approach in use, while in alignment with the requirements of the U.S. DOE program, assumes that a household with a priority category will get served. However, given the current level of funding, the number of households WAP can serve each year, and the number of Minnesota households who could qualify for WAP services, it would take nearly 300 years to weatherize all eligible Minnesota households (at the current rate of service).

Minnesota will work to target initiatives to the most needful clients within those priority categories by undertaking a data-based analysis of where Minnesota’s WAP program is operating optimally and where barriers exist, that if removed, would allow the program to better serve those most in need. For example, a preliminary high-level assessment of equity performance gaps indicates that there is room for improvement in several areas. Although the preliminary assessment was limited in scope, utilizing data from only one program year (2020) (an abnormal performance year given the COVID-19 pandemic), some trends emerged. The four preliminary areas identified as target areas for improvement in the delivery of equitable service, are:

1. POVERTY- WAP participation rates in three counties are substantially out of alignment with the poverty rates of those counties;
2. RACE- WAP participation rates for communities of color are out of alignment with person-of-color population data of income-eligible households in five counties;
3. HOUSING TYPE/RENTERS- WAP participant housing type for attached and multi-unit housing is 22% lower than statewide rates. Renter participation rates in WAP are out of alignment in 12 counties;
4. ENERGY BURDEN - Six counties with the highest energy burden in the state (> 5%) have among the lowest participation rates in WAP.

Minnesota Staffing:

Minnesota will continue to use a portion of the leveraging budget to support a fulltime Weatherization Leveraging Specialist position, with primary responsibility to:

- Investigate and acquire additional federal and nonfederal leveraged funds to support or expand WAP services;
- Build a robust partnership network;
- Develop long-term, aligned cooperative agreements, and projects; and
- Align leveraging activities with efforts to better serve clients in target areas as identified by WAP performance Equity Gaps analysis.

The Weatherization Leveraging Specialist will be responsible for conducting the Activities listed below and provide direction and oversight on the items listed under Contractual Leveraging Budget items.

In furtherance of the equity approach outlined above, Minnesota WAP has added a Project Administrator/Data Analyst position, with primary responsibility to:

- Conduct data analysis, develop data resources, and develop recommendations to support new and existing leveraging activities;
U.S. Department of Energy
WEATHERIZATION ASSISTANCE PROGRAM (WAP)
WEATHERIZATION ANNUAL FILE WORKSHEET
(Grant Number: EE0009910, State: MN, Program Year: 2022)

- Assist in program design, implementation, and management of programs and initiatives that target the identified gaps; and
- Conduct data analysis and results tracking for post-implementation administration of leveraging initiatives.

Minnesota Activities:

Ongoing Leveraging Activities (not specific to a budget line item)

a. Expanding Services via LIHEAP-transfer, Utility, and State Funded Initiatives

PY22 activities will build on increased funding authorization implemented in PY21. Effective July 1, 2021, the LIHEAP-transfer funding percentage was increased to 15%, and Energy Assistance Program (EAP) policy changes were implemented to both increase the number of measures to be funded by LIHEAP-transfer funds and to provide additional flexibility in the rules regarding the WAP application of the funding. Additionally, in 2021, the Energy Conservation and Optimization Act (ECO) was signed into law, which increased the amount of funds utilities will spend on low-income Conservation Improvement Program (CIP) activities and authorized pre-weatherization (deferral mitigation) measures as eligible uses of up to 15% of these funds. Finally, the ECO Act also set up a secondary Healthy AIR account for interested utilities to contribute directly to the removal of asbestos-laden vermiculite with one utility already planning to contribute to the fund. The Minnesota State Legislature is currently considering legislation to increase state funding for WAP, covering weatherization and pre-weatherization measures, as well as providing an allowance for training to create a weatherization career pipeline. Minnesota WAP has and will expand efforts to seek additional funding under various federal funding opportunities and has and will continue to work on national efforts to remove challenges to utilization (of US DOE WAP) with funding from other federal agencies.

b. Expanding Solar Access

The US DOE has authorized Minnesota to install residential solar PV systems on WAP houses statewide, rather than under the limited geographic area offered in the pilot program. The 15 homes in the pilot program now generating on-site solar electricity are forecasted to see an average electric bill reduction of $587 annually, or an average decrease of 45%. These savings are in addition to the energy cost savings resulting from core weatherization work and demonstrates the importance of expanding the solar program to assist more low-income Minnesotan households. Minnesota will continue to work on increasing the implementation of solar PV as a weatherization measure by working with WAP service providers and solar installers statewide.

Recent changes to the US DOE NEPA Categorical Exclusion will assist in Minnesota expanding the size and type of solar installations in WAP. The expansion of the Categorical Exclusion policy to now cover ground-mounted systems and systems on detached, on-site buildings allows the use of solar in siting situations previously disallowed, such as manufactured homes and households where a detached garage or shed would offer a better PV installation site than on the roof of the house. In addition, the change to allow PV systems sized up to 60kW (rather than 15kW) allows for Minnesota to consider solar PV systems sized to meet the needs of small (2-4 unit) multi-family buildings and single-family households with large electrical loads. Additional work, on developing utility or other partnerships to offset the costs of these systems will take place in PY22.

c. Individualized Utility Outreach and Program Support

Minnesota has over 180 utilities, with roughly half offering Conservation Improvement Programs (CIP) and a portion of those offering low-income-focused CIP programs. The high number of utilities in the State means many of WAP’s 23 Minnesota service providers have many CIP programs to track for successful utilization of utility CIP program funding. With the additional stipulations regarding utility low-income, CIP funding enacted as part of 2021’s ECO law (see item a) above), to ensure smooth application of CIP funding to WAP projects, enhanced coordination and collaboration with the Commerce Department responsible for utility regulation and oversight, the WAP service provider network, and individual utilities will be pursued.

d. Interdepartmental Coordination

Efforts to reduce “silos” across State of Minnesota departments and agencies will continue, ensuring inter-departmental awareness of efforts and collaboration and coordination of efforts, in order to leverage non-WAP funding to serve households more deeply.

c. Outreach and Relationship Development

Leveraging staff will continue to develop relationships and discuss alignment possibilities with organizations focused on energy equity, health equity, environmental justice and climate change mitigation, and community improvement/development issues.

Contractual Leveraging Budget Line Items

a. Weatherization Barrier Reduction Landscape Analysis

In PY21, Minnesota WAP assembled a group of stakeholders for a Weatherization Working Group, with the goal of providing legislative and programmatic recommendations, including detailed information on the current and long-term needs for funding. This resulted in an initial Landscape Analysis and Working Group Recommendations Report. In addition, a WAP funding bill, currently under consideration by legislators, is one of the direct results of the Working Group. Minnesota WAP has a goal of reducing energy burdens for all of Minnesota to under 5%; the Working Group delved into the broad challenges WAP faces in meeting this goal. To better understand potential paths forward while delivering equitable services to reduce energy burden, Minnesota will engage the University of Minnesota Chan Labs, working in conjunction with the Wilder Research Foundation, to further the Working Groups efforts in three ways:
U.S. Department of Energy

WEATHERIZATION ASSISTANCE PROGRAM (WAP)
WEATHERIZATION ANNUAL FILE WORKSHEET

(Grant Number: EE0009910, State: MN, Program Year: 2022)

1. Identify funding sources and weatherization initiatives other states are using to reduce energy burden, with particular attention to any equity-focused programs. Findings will help Minnesota define, design, and implement an innovative WAP approach to move income-qualified Minnesotans along a pathway towards an “under 5%” energy burden. Minnesota will seek the assistance of expert outside consultants, as necessary, to design a user-centered, innovative 21st-century approach to pre-weatherization, weatherization, and weatherization-plus activities to address energy, health, and safety needs for an expanded number of WAP clients.

2. Build on earlier research work (a survey of LIHEAP service providers) conducted by the Wilder Research Foundation) to conduct surveys with WAP service providers on local realities of delivering weatherization services, and to create an equity baseline for Minnesota’s 23 WAP service providers; and

3. Develop a more robust WAPMAP (see next item) for use internally at Commerce.

b. WAP Analytics

The Weatherization Assistance Program is a tool for goal attainment in four high-interest and high-need areas:

- Energy equity,
- Health equity,
- Job creation and workforce development, and
- Environmental justice and climate change mitigation.

A better understanding of historical WAP performance data and census-tract level attributes of tract population and tract externalities will allow WAP staff to better understand the cross-implications of weatherization work and better situate WAP to explore and acquire leveraged funding. With equity as a primary driving focus of Minnesota WAP, an Equity Gaps analysis of the historical performance of the program compared to census tract information will be key for Minnesota to expand the depth and breadth of WAP services.

In conducting the Equity Gaps analysis, Minnesota will utilize publicly available census-tract level information displayed in WAPMAP, a mapping tool developed to layer together various population attributes. The current Beta version of WAPMAP is an online, interactive tool with data such as the percentage of the population in poverty (<100% FPL) or eligible for WAP (< 200%), the percent of the population identifying as Black, Indigenous, or people of color, the average energy burden for households in poverty, the location and size of manufactured home parks, and the location of Opportunity Zones and the Social Vulnerability Index (SVI). Layers displaying various geographic boundaries can be selected to display on WAPMAP, including utility service territories, tribal lands for the 11 Tribal Nations who share geography within Minnesota boundaries, and the historically red-lined neighborhoods within Minneapolis, St. Paul, Rochester, and Duluth. Equity gap analysis of WAP’s historical performance, in combination with WAPMAP census-tract information, will allow for targeting of WAP efforts to better deliver equitable service to historically under-served communities and those most in need.

In conjunction with and coordinated with the Weatherization Barrier Reduction Landscape Analysis (noted above), the current publicly accessible beta version of WAPMAP will be enhanced and a separate, internal-Commerce only version of WAPMAP will be developed. The new private WAPMAP tool will allow layering in of weatherized, deferred, and waitlisted WAP household locations, to allow Minnesota staff to more efficiently identify historical service levels in identified Equity Gap target areas and then design initiatives to address the gaps.

c. Solar Technical Assistance and Project Management Support

A consulting Solar Technical Assistance Liaison (STAL) has worked with the “solar cohort” of WAP service providers since December of 2020. The STAL is a dedicated resource to guide, educate and support the service providers as they incorporate solar into their list of potential WAP measures. The complexity and timeline of the planning phase of solar PV projects mean that the project management of a solar measure is significantly different than the project management of core weatherization measures, a potentially intimidating factor when WAP service providers consider adding solar to their list of WAP measures. The role of the STAL will grow during PY22 to include technical mentoring, project management, fund braiding and processing support, allowing service providers to implement the initiatives more effectively, efficiently, and confidently. The Healthy AIR initiative is an existing state-funded program that was authorized during PY21 to also qualify for funding with LIHEAP-transfer dollars. CCASHPs are new technology to the Minnesota WAP network of service providers, and the TAL model will allow the WAP network to gain the necessary understanding of the technology and fully incorporate this key decarbonization measure into WAP while utilizing non-DOE funds.

d. New Technical Assistance Liaisons

Minnesota will issue Request for Bids for the services of two new Technical Assistance Liaisons (TAL), specifically to work on the expansion of the Healthy AIR (Asbestos Insulation Remediation) and Cold Climate Air Source Heat Pump (CCASHP) initiatives. These areas are opportunity areas for Minnesota to serve more equitably under-resourced communities. Contracted TAL services will include technical mentoring, project management, fund braiding and processing support, allowing service providers to implement the initiatives more effectively, efficiently, and confidently. The Healthy AIR initiative is an existing state-funded program that was authorized during PY21 to also qualify for funding with LIHEAP-transfer dollars. CCASHPs are new technology to the Minnesota WAP network of service providers, and the TAL model will allow the WAP network to gain the necessary understanding of the technology and fully incorporate this key decarbonization measure into WAP while utilizing non-DOE funds.

c. AmeriCorps and GreenCorps Cohort Programs

Four AmeriCorps program members were placed in WAP service provider locations during PY21, with their placement supported in part by USDOE Leveraging Activities funds. Each Service Provider prioritizes the work the Corps participants undertake at each agency with activities including client education, pre-energy audits, household eligibility determination, in-house light bulb replacement, etc. Placement of these AmeriCorps members has proven successful, especially in allowing WAP service providers to handle work associated with "expanded" services such as solar; AmeriCorps members have been instrumental in solar PV work (household suitability assessment and other solar project management work). The AmeriCorps program will be expanded in PY22 to allow placement of up to six AmeriCorps members. Additionally, eight GreenCorps members will be placed at service providers in the WAP network; GreenCorps is a long-running program very similar to...
The goal of this program is three-fold:

1. acquire additional staff resources for WAP service providers to allow staff to serve additional households;
2. better serve existing WAP/EAP clients, increase the awareness of the programs amongst low-income Minnesotans, and increase enrollment;
3. expose Corps participants to the WAP program and develop interest among volunteers in pursuing a career in weatherization, building the work-force pipeline to bring additional workers in to serve Minnesota WAP’s low-income clients.

f. Leveraging Activities by Local WAP Service Providers

Minnesota first implemented the Leverage Assistance Support Fund (LASF) in PY20, and continued the LASF, in PY21, for support of WAP service providers undertaking local leveraging activities. The LASF is used by service providers to pay for staff activity researching, developing, and pursuing leveraged funding and designing, implementing, and managing programs which use leveraged funding. Given the increased federal funding during PY21, a decreased use of the LASF was exhibited by many service providers as they focused on spending DOE and LIHEAP-transfer funding. The LASF will continue to be offered in PY22 to those service providers who have come to rely on having support for their leveraging activities.

g. Deferral Tracking Software

Minnesota uses FACSPro software for program operations, fiscal matters (funds distribution and reporting) and household management. In managing households in FACSPro, service providers update the household status and track work progress. While FACSPro does have deferral tracking capability currently, additional functionality is needed. As deferral-mitigation efforts increase during PY22 with the increases in Federal, State and utility pre-weatherization funding, FACSPro’s deferral management functionality needs further development. Training will be provided as the new functionality is developed to ensure the service provider understands and consistently applies the new deferral policy, procedures and deferral-mitigation initiatives and knows how to best utilize FACSPro to do so.

### IV.5 Policy Advisory Council Members

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Type of organization</th>
<th>Contact Name</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>CenterPoint Energy</td>
<td>Utility</td>
<td>Carter Dedolph</td>
<td>6123214412</td>
<td><a href="mailto:carter.dedolph@centerpointenergy.com">carter.dedolph@centerpointenergy.com</a></td>
</tr>
<tr>
<td>Citizens Utility Board</td>
<td>Non-profit (not a financial institution)</td>
<td>Brian Edstrom</td>
<td>65130047016</td>
<td><a href="mailto:briane@cubminnesota.org">briane@cubminnesota.org</a></td>
</tr>
<tr>
<td>Clean Energy Resource Teams</td>
<td>Non-profit (not a financial institution)</td>
<td>Joel Haskard</td>
<td>6126258759</td>
<td><a href="mailto:haska004@umn.edu">haska004@umn.edu</a></td>
</tr>
<tr>
<td>Fond Du Lac Reservation Business Committee</td>
<td>Indian Tribe</td>
<td>Joan Markon</td>
<td>2188794593</td>
<td><a href="mailto:joanmarkon@fdlrez.com">joanmarkon@fdlrez.com</a></td>
</tr>
<tr>
<td>Great River Energy</td>
<td>Utility</td>
<td>Jeff Haase</td>
<td>7634456106</td>
<td><a href="mailto:jhaase@grenergy.com">jhaase@grenergy.com</a></td>
</tr>
<tr>
<td>Home Performance Strategies</td>
<td>For-profit or Corporate (not a financial institution or utility)</td>
<td>Kevin Brauer</td>
<td>6128680365</td>
<td><a href="mailto:kevinbrauermn@gmail.com">kevinbrauermn@gmail.com</a></td>
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<tr>
<td>Minnesota Valley Action Council</td>
<td>Non-profit (not a financial institution)</td>
<td>Kris Perendy</td>
<td>5073452434</td>
<td><a href="mailto:krisp@mnvac.org">krisp@mnvac.org</a></td>
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<tr>
<td>Prairie Five Community Action Council, Inc.</td>
<td>Non-profit (not a financial institution)</td>
<td>Laura Milbrandt</td>
<td>3202696578</td>
<td></td>
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</table>
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

04/27/2022  On April 18, 2022, notice of a Virtual State Plan public hearing was sent to all WAP Service Providers and subscribers of the Conservation Improvement Program newsletter, which focuses on utilities (8,500+). The draft copy of the PY22 State Plan was posted on the Commerce website on April 18, 2022 and a link to the posting was included in the Notice. A Virtual Public Hearings took place on April 27 at 3:00 PM via WebEx to comply with the annual state plan hearing required in 10 CFR 440.14 and COVID-related guidance from DOE.

IV.7 Miscellaneous

PY22 Weatherization Readiness Fund Plan

Weatherization Readiness Funds will be used in Minnesota to reduce the number of deferrals by providing flexibility to our sub-grantees to address weatherization barriers at the local level. Weatherization Readiness Funds will allow Service Providers to address the variety of unique and vexing issues present in clients homes that lead to an inability to provide weatherization services.

Minnesota will distribute Weatherization Readiness funds per our usual funding formula which is based on general population of Service Area, population living in poverty, and a number of other factors.

At the sub-grantee level, individual homes will be prioritized by considering three factors. First the home will be assessed as to its probability in resulting in a weatherized home. Second, the home will be assessed to determine if other funds can be used to address the deferral reason such as Conservation Improvement Program, Rehabilitation, or agency funds. Finally, the home will be assessed for overall cost and compared against the full group of deferrals to manage costs to the average.

It is Minnesota’s goal to allow local sub-grantees appropriate flexibility in managing Weatherization Readiness Funds. Because homes and circumstances are unique, this flexibility will allow sub-grantees to address the varied situations that arise in the most cost-effective manner possible with the most benefit to the homeowner. Once projects have been assessed as noted above, Minnesota will expect Service Providers to manage to the State Weatherization Readiness Fund average and that each home served results in a weatherized unit.
Based on information gathered about deferrals in Minnesota over the last several years, it is anticipated that issues to be addressed with these funds will include:

- Mold and Moisture related:
  - Structural repair (foundation, roofing, windows/doors, repair or replacement
  - Grading for seepage control
  - Gutters/Downspouts repair, replacement, or addition
  - Sump pumps – repair, replacement, or addition
  - Black mold removal
- Radon mitigation
- Structural repair or replacement (non-moisture related) – Foundation, roofing, windows/doors
- Plumbing leaks / sewer problems
- Major electrical upgrading – replace K/T, upgrading panel, etc.
- Inaccessible crawl spaces
- Remediation of excessive clutter or hoarding
- Chimney liners
- Integrated Pest Management (bugs and vermin remediation and blocking)

Although vermiculite in attics is the largest cause of deferrals in the State, other funds are available to address this barrier to weatherization.

Minnesota will set a Statewide Weatherization Readiness Fund average of $5,000 for all service Providers. Any projects that go over $8,000 will be required to receive prior approval from Minnesota Department of Commerce Energy Equity Staff.

Monitoring will take place as a component of the existing field and administrative monitoring activities. Specifically, monitors will verify that the Weatherization Readiness Funds were spent on a home that resulted in weatherization, that the Statewide Weatherization Readiness Fund average was maintained, and that any projects costing more than $8,000 were approved prior to project start. Additionally, monitors will review the quality of the work performed in preparing the home for weatherization to determine that it is completed in the workmanlike and professional manner expected of weatherization work.

**Recipient Business Officer:**

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<thead>
<tr>
<th>Prefix:</th>
<th>Ms.</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
<td>Amy</td>
</tr>
<tr>
<td>Middle Name:</td>
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<tr>
<td>Last Name:</td>
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<tr>
<td>Title:</td>
<td>Chief Financial Officer</td>
</tr>
<tr>
<td>Telephone Number:</td>
<td>(651) 539-1517</td>
</tr>
<tr>
<td>Fax:</td>
<td>(651) 539-0109</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:amy.trumper@state.mn.us">amy.trumper@state.mn.us</a></td>
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</table>

**Recipient Principal Investigator:**

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<thead>
<tr>
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<th>Mr.</th>
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<tbody>
<tr>
<td>First Name:</td>
<td>Charles</td>
</tr>
<tr>
<td>Middle Name:</td>
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<tr>
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<td>Department of Commerce/Div. of Energy Resources</td>
</tr>
<tr>
<td>Telephone Number:</td>
<td>(651) 539-1866</td>
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<td>Email:</td>
<td><a href="mailto:Charles.newborn@state.mn.us">Charles.newborn@state.mn.us</a></td>
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V.1 Eligibility

V.1.1 Approach to Determining Client Eligibility

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

The Minnesota Department of Commerce (Minnesota) uses a combined LIHEAP/WAP application to determine eligibility for both the Energy Assistance (LIHEAP) and Weatherization Assistance Programs (WAP). For the purpose of this application, income is defined as all income and all money received by each household member. This includes:

- Wages
- Minnesota Family Investment Program, Diversionary Work Program, General Assistance
- Spousal Support or Alimony
- Disability Payments, Veteran’s Benefits, Workers’ Compensation, Social Security, RSDI and SSI
- Unemployment Compensation
- Self Employed, Farm, and Rental Income
- Interest, Dividend
- Retirement Income
- Pensions and Annuities
- Tribal Bonus, Judgments or Per Capita Payments

Describe what household eligibility basis will be used in the Program.

A dwelling unit is eligible for Weatherization services if it is occupied by a household whose income is at or below 200% of Federal Poverty Income Guidelines or is eligible for assistance under the LIHEAP income limit of 60% of State Median Income, whichever is greater, as allowed by 10 CFR 440.22 and required under Minnesota 2009 Session Laws, Chapter 138, Article 2, Subd. 4.

Households in which one or more members have received payment under Title IV or XVI of the Social Security Act during the preceding 12 months are also eligible.

Households with both ineligible household members and eligible household members may apply for weatherization services to benefit the eligible household members. All household income (including income from ineligible household members) must be considered when determining eligibility. When determining level of benefits, income of ineligible household members must be excluded. Ineligible household members may apply for weatherization services to benefit eligible household children, providing that SSN and proper documentation is provided at the time of application.

In all cases stated above, eligibility is determined by the eHEAT software system, a tool developed by Minnesota's LIHEAP program with input from WAP staff. The eHEAT system determines income eligibility and centralizes payments to utility companies.

The eHEAT system also identifies individuals that do not qualify for LIHEAP but are eligible for WAP. For individuals that choose not to apply for LIHEAP, the application and eHEAT process is used to determine eligibility for WAP services.

When Minnesota or its sub grantees certify that applicants have met the income requirements of HUD means-tested programs according to WPN 22-5, the method of verification of eligibility will be included in the client file.

All application eligibility expires 12 months from certification date if work on dwelling unit (energy audit) has not been initiated.

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

As noted, the Minnesota Department of Commerce (Minnesota) uses a combined LIHEAP/WAP application to determine eligibility for both the Energy Assistance (LIHEAP) and Weatherization Assistance Programs (WAP). All potential recipients of WAP services are asked to provide information that ensures they are eligible as described. Per Energy Assistance Program Policy Manual FF21 produced by the Minnesota Energy Assistance Program, qualified aliens may provide an alternative to a Social Security number to meet this requirement.

FFY22 EAP Policy Manual (mn.gov)

V.1.2 Approach to Determining Building Eligibility
Procedures to determine that units weatherized have eligibility documentation

When occupied by an eligible household, the following dwellings are eligible for weatherization, whether owner-occupied or rental properties:

- Single Family Homes;
- Mobile Homes/Manufactured Homes;
- Multifamily buildings containing 2 or more units;
- Townhomes (treated as individual single-family dwellings provided there is a physical separation between each townhome’s thermal barrier, air pressure boundary, mechanical systems, and individually metered units).

Owner Occupied Dwellings Proof of Ownership

Service Providers must verify home ownership and add proof of ownership to the household file for owner-occupied households. Proof of ownership ensures that proper authorization is obtained prior to weatherizing a dwelling.

Proof of ownership documentation includes:

- Property tax statements;
- Mortgage statements;
- Contract for deeds recorded with the county;
- Quit claim deeds recorded with the county;
- Online or written information from a county recorder or assessor;
- Official county receipt for transfer of title;
- Ownership validation from a tribal government;
- Other documentation preapproved by the Minnesota Department of Commerce.

Mobile/manufactured homes may be owned either as personal property or real property. If the mobile home is titled through Driver and Vehicle Services, it is considered personal property and the Certificate of Title issued by Driver and Vehicle Services serves as proof of home ownership. If the mobile home title was surrendered to the county, then the home is considered real property and documentation of ownership would be the same as for other nonmobile homes.

Rental Dwelling Income Documentation Requirements

Single-Family Rental Requirements: a single-family dwelling (one unit) must be occupied by an eligible household prior to the start of any weatherization activities. Household eligibility is determined through review of household-supplied information contained in eHEAT as described earlier.

Multifamily Rental Requirements: Service Providers may weatherize multifamily buildings containing two or more units. Weatherization is designed to occur on the whole building in a systems approach. A single unit within a multitenant building may not be weatherized.

Eligibility for each building in a multifamily complex of buildings is determined separately. For a multifamily building to be eligible for weatherization services, at least 66% of the building units (50% for duplexes and fourplexes and “certain eligible types of large multifamily buildings” as referenced in WPN 16-5) must meet one of the following:

- Have income-eligible households in the dwelling units, or;
- Will have income-eligible households in the dwelling units within 180 days under a Federal/State program for rehabilitating the building.

Prior to being accepted into the Weatherization program, multifamily buildings are checked against household eligibility requirements, and the expenditure limits for Weatherization work in the building are verified.

Rented townhomes with complete separation between the building units’ thermal barriers, air pressure boundaries, mechanical systems, and with individually metered units may be treated either as individual units, or, if eligibility is met, as a multifamily building.

Describe Rereathering compliance

Minnesota maintains a centralized previously weatherized list in the production management software used by all Service Providers. This centralized list captures all homes previously weatherized using DOE funds in Minnesota and is based on the historical previously weatherized lists of all active and past Service Providers. Service Providers verify previously weatherized status via the software to ensure current eligibility prior to undertaking Weatherization work on the home. Weatherized Households are added to the list as Weatherization work is completed.

With re-weatherization guidance from DOE, Minnesota adjusted procedures accordingly. Specifically, the production management software has been programmed to address the rolling 15 year time frame and allows only qualified homes to progress through the weatherization process.
Minnesota will also verify previously weatherized houses completed by HUD, HHS and USDA per the forthcoming DOE guidance.

Describe what structures are eligible for weatherization

Structures that are eligible for weatherization include single family, manufactured homes, and multifamily buildings. Minnesota has approved audits for single family (2021), manufactured homes (2021), and multifamily buildings (2019). Nontraditional dwelling types such as shelters and mixed-use buildings may be allowed but must be reviewed and approved by Minnesota prior to weatherization to ensure that the dwelling meets program regulations. (Section 3.4 of the Minnesota Weatherization Assistance Program Policy Manual addresses mixed-use buildings.) If deemed necessary, Minnesota will seek approval from the USDOE Project Officer for the weatherization of a nontraditional dwelling. Single family structures must be occupied prior to weatherization. The weatherization of non-stationary campers and trailers that do not have a mailing address associated with the eligible applicant is not allowed per DOE regulation.

Service Providers are required to complete a State Historic Preservation (SHPO) review for all dwellings prior to the commencement of any weatherization activity. Minnesota’s SHPO Programmatic Agreement (PA) was extended until 12/31/2025. Compliance monitoring includes verification of SHPO review and previously weatherization status in sampled household files.

Describe how Rental Units/Multifamily Buildings will be addressed

Rental dwellings have equal access to WAP services as owner-occupied dwellings with household eligibility determined as described above.

Per 10 CFR 440.22, Service Providers may weatherize rental properties where tenants do not directly pay heating bills, provided the benefits of weatherization accrue primarily to the income eligible tenant(s).

In those cases, property owners must provide detailed justification to Service Providers indicating how benefits of weatherization will accrue to tenants.

Examples of accrual of benefits to tenants who do not directly pay heating bills include, but are not limited to:

- Investment of the energy savings from weatherization work in specific health and safety improvements with measurable benefits to tenants,
- Longer term preservation of the property as affordable housing,
- Investment of the energy savings in facilities or services that offer measurable and direct benefits to tenants,
- Improvements to heat or water distribution and ventilation to improve the comfort of residents,
- Continuation of protection against rent increased beyond the local written agreements required under WAP regulations (10 CFR 440.22), and
- Establishment of a shared savings program.

Once deemed sufficient by the Service Provider, Minnesota approval is required prior to beginning weatherization work.

Service Providers and property owners are required to sign a Property Owner Agreement prior to the start of weatherization work which must contain several elements:

- The Property Owner Agreement must contain written permission of the building owner (or agent) for Weatherization service personnel to undertake weatherization work on the building.
- The Property Owner Agreement must state that rent on WAP weatherized properties (those using USDOE funds) cannot be increased because of the increased property value associated with the weatherization work. This agreement is required to be in force to cover “a reasonable period of time after weatherization work has been completed.”
- Property Owner agreements must contain language that no undue or excessive enhancement shall occur to the value of the dwelling unit being weatherized.
- Tenants may file complaints to Service Providers, Minnesota, or both if concerns arise over the agreed upon terms of the Property Owner Agreement. Property Owners, in response to such complaints, shall demonstrate that the rent increase concerned is related to matters other than the weatherization work performed.

During Annual Administrative Monitoring, Minnesota confirms that each Service Providers has a Property Owner Agreement in place and that it is in compliance with Minnesota WAP Policy.

Eligibility for each building in a multifamily complex of buildings is determined separately. For a multifamily building to be eligible for weatherization services, at least 66% of the building units (50% for duplexes and fourplexes and “certain eligible types of large multifamily buildings” as referenced in WPN 16-5).

Minnesota requires the property owner to financially contribute to the weatherization of a multifamily
describe the deferral process

there are conditions or situations when an eligible dwelling unit should not be immediately weatherized, but rather deferred until unacceptable conditions are mitigated. A deferral determination may be made during the eligibility process, during the audit, or after weatherization work has begun.

Service Providers may elect to defer a home from receiving weatherization services when health and safety hazards exist for the staff, contractors or clients, or when conditions exist in the home which cannot be addressed by WAP and which prevent the safe and effective implementation of weatherization measures. Weatherization work will be postponed until the problems are resolved or alternative resources are found to address the hazards.

Service Providers are expected to pursue reasonable options on behalf of the dwelling owner and to use good judgment in dealing with difficult situations. Service Providers shall not defer service without pursuing other options and identifying other resources to address the identified hazards. Whenever appropriate, educational information on how to address the hazard is shared with the occupant. If corrections are made to the deferred dwelling and the corrections eliminate the issue that led to the deferral, the Service Provider may proceed with weatherization so long as the household’s EAP application is current and approved.

Service Providers are required to track deferred units and deferral reasons in a centralized location in the production software (currently FACSPro). This is also the software that tracks eligibility and so those records are connected through the software. The record for each deferred household is assigned a deferral reason which may include vermiculite, clutter, structural repair issues, etc.

conditions where Service Providers must not use DOE funds to weatherize dwellings include:

- The dwelling was weatherized less than 15 years prior to the current date;
- The dwelling is scheduled for demolition;
- The condition of the structure would make weatherization impossible or impractical (e.g., inability to meet SWS).

Other deferral situations may arise as the result of a review and judgement made by the Service Provider. Examples where the deferral may occur, depending on the Service Provider assessment, include, but are not limited to:

- The dwelling is in the process of being sold;
- The dwelling is in the process of being remodeled;
- The owners have refused cost effective measures determined by the energy modeling software tool. Service Providers must then defer that dwelling per WPN 19-4 attachment 8 unless approval from Minnesota is requested and approved;
- The building structure or its mechanical systems (including electrical and plumbing), are in such a state of disrepair that failure is imminent, and the conditions cannot be resolved cost-effectively;
- The house has sewage or other sanitary problems that would further endanger the client and or weatherization installers if weatherization work were performed;
- The house has been condemned or a major household system (electrical, heating, plumbing, or other equipment) has been "red tagged" by a local or state building official or a utility, and the unacceptable conditions cannot be resolved with WAP funds;
- The dwelling has severe moisture problems that cannot be resolved under existing health and safety measures and with minor repairs;
- The dwelling has dangerously high carbon monoxide levels in combustion appliances that cannot be resolved under existing health and safety measures;
- The extent and condition of lead-based paint in the house would potentially create further health and safety hazards;
- The energy auditor determines a condition(s) exists which may endanger the health or safety of the work crew or subcontractor, requiring that the work not proceed until the unsafe condition is corrected;
- The client has a known health condition(s) that prohibits the installation of insulation and other weatherization materials;
- Dwellings which contain vermiculite insulation, as all vermiculite insulation is assumed to contain asbestos.
- The cost to weatherize a home is so significant that it will negatively impact the Service Provider’s ability to meet the statewide average cost per dwelling. Minnesota must be notified in writing prior to deferring a dwelling for this reason.

Service Providers may also defer households for the reasons below. In these cases, Service Providers must issue, in a timely manner, written notification to the client. Client signatures on a deferral form are not required in cases where Service Provider staff feel threatened or unsafe. In these cases, notification by certified mail is recommended.
The presence or use of any controlled substance is evident or observed by auditors, inspectors, contractors, crews, or anyone else who must work on or visit the home; The client is uncooperative, abusive, or threatening to the crew, subcontractors, auditors, inspectors, or others who must work on or visit the house. In cases where an individual client feels a deferral is unfairly determined, the client may appeal a decision to defer.

Additional information about deferral process can be found in the Minnesota Weatherization Assistance Policy Manual Section 3.8 (Policy Manual attached). A client whose home is deferred must be informed of their right to appeal per the client appeals policy outlined in policy Minnesota Weatherization Assistance Policy Manual Section 1.6.

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.

All eligible households, including those with Native American Indian members, are served equally without regard to race, color, national origin, gender, or religion. The Minnesota Weatherization Assistance Program contracts directly with three of Minnesota’s tribal nations. Tribal sub-grantees for the Minnesota WAP program are Fond du Lac Reservation Business Council, White Earth Reservation Tribal Council, and the Mille Lacs Band of Ojibwe. The other five tribal nations within Minnesota are served by the WAP Service Providers who serve the closest geographic territory to tribal lands.

V.2 Selection of Areas to Be Served

Minnesota serves all 87 counties in the state and provides equal access to WAP services for all eligible households. The Minnesota Weatherization Assistance Program serves these 87 counties via a network of 23 Service Providers. Service Providers are either Community Action Partners, Tribal Nations, Counties, or other nonprofit organizations.

V.3 Priorities

As required by federal regulation, Minnesota WAP prioritizes households which contain:
- Children under 19;
- Persons with disabilities;
- Elderly persons;
- A high-energy burden;
- High-energy use.

On an annual basis, WAP staff work with LIHEAP staff to determine thresholds for high energy use and high energy burden. In PY20, Minnesota updated the high energy burden priority to use the median energy burden for all low-income Minnesota households from the American Communities Survey data from 2016 that was made available through the LEAD tool.

Service Providers set the order of priorities to determine which households to weatherize first and may elect to use a combination of priorities to best serve the eligible population in their service territory. Service Providers may also choose to queue waiting households within a prioritization category based on the length of time since the EAP/WAP application approval date. Service Providers are required to have a documented policy for their prioritization system, and they must not discriminate due to housing type.

High energy use households, especially those without secondary heat sources, may be prioritized by a Service Provider when an energy crisis is anticipated or in the year following an energy crisis, especially for households using high-cost fuels such as propane.

Service Providers communicate to Minnesota the household prioritization criteria they will use and then select from eligible applicants in their Service Area based on the prioritization system they have documented. Minnesota staff monitor for performance against goals during the annual Administrative Monitoring visit.
V.4 Climatic Conditions

Minnesota has a continental type of climate, subject to frequent outbreaks of continental polar air during the cold season and periods of prolonged heating during summer, particularly in the southern portion of Minnesota. Mean annual temperatures range from 37.4°F in the extreme north to 48.85°F along the Mississippi River in the southeast. State temperature extremes range from 60 to 114°F. Monthly mean temperatures vary from 85°F in the southwest to 11°F in the northwest. Mean temperatures during January in the northern portions of the State average near 4°F.

Minnesota is located in International Energy Conservation Code Climate Zones 6 and 7. Minnesota uses the Weatherization Assistant API and adjusts for client’s specific climatic conditions and fuel costs as appropriate. Average Heating Degree days in Minnesota range from 7,340 to 10,269. Average Cooling days in Minnesota range from 128 to 937.

(Sources: National Weather Service and Minnesota Department of Natural Resources)

V.5 Type of Weatherization Work to Be Done

V.5.1 Technical Guides and Materials

All weatherization work in Minnesota is performed in accordance with DOE-approved procedures, including the appropriate DOE-approved energy audit (single family, multifamily, or mobile home), the Minnesota WAP Policy Manual, 10 CFR 440 Appendix A, and the Standard Work Specifications (SWS). Minnesota provides Service Providers with “RETROFITTING MINNESOTA: STANDARD WORK SPECIFICATION-ALIGNED FIELD GUIDE” (Retrofitting Minnesota – SWS-Aligned Field Guide for Weatherization Crews [mn.gov]), which contains information about audits/testing, installation of energy conservation, health and safety, incidental repair measures, final inspections, and the Minnesota SWS Variances. The Field Guide was approved and went into effect in January 2021 and the Minnesota variances were updated and reapproved by DOE in August of 2018 and went into effect January 17, 2019. A multifamily field guide based on NREL’s Multifamily SWS also was approved by DOE also went into effect January 2021.

All sub-grantee Service Provider contracts contain the following language confirming the receipt of, and conformance with, all applicable USDOE WPNS and Memoranda, the MN WAP State Plan, the MN WAP Policy Manual, and the MN WAP Field Guide including the SWS for single family, multifamily and mobile homes.

“The Grantee will perform work and expend funds within the above timeframes. Work must be performed in full accordance to the quality of the specifications outlined in the following: The Minnesota WAP Policy Manual, Minnesota WAP Weatherization Field Guide, for single family, multifamily and mobile homes, the Standard Work Specifications (SWS), and Minnesota’s DOE Approved SWS Variances.”

Minnesota WAP Sub-Grantee Contracts

Sub-grantees have access to the WAP Policy Manual, Field Guide, and a number of other documents and information resources at the provider-facing weatherization site. In signing the contract, sub-grantees confirm that they have read and acknowledged the expectations for work quality as outlined in the contract. Additional information on all standards is available through training opportunities and through technical assistance received during monitoring or by sending an email to the weatherization inbox seeking technical guidance.

Service Providers are required to include similar language in their contracts with contractors who perform work for WAP. MN WAP Policy Manual Section 7.4.3 requires:

1. There is written agreement with all contractors specifying the terms and conditions under which work will be performed, including consequences for noncompliance or underperformance
2. Contracts confirm terms, conditions, and specification of the agreement.
3. Contractors complete work that is in accordance with the policies in this manual.

These contracts include acknowledgement that their contractors have read and acknowledged the expectations for work quality including the Minnesota WAP Policy Manual, Retrofitting Minnesota Standard Work Specification-Aligned Field Guide, the Standard Work Specifications (SWS), and Minnesota’s DOE Approved SWS Variances.

Contractor signatures on the contract indicate receipt of the relevant documents and agreement to conduct weatherization work to the indicated standard. Dependent on the individual Service Provider, these are provided as hard copies or web links. Administrative monitors review contracts for compliance. Field monitors, through monitoring inspections, confirm conformance with the SWS.

The following materials are approved for use and not in Appendix A of CFR 440:

- Grantee-administered fuel switching authority 2/10/2016
- LED lighting approved by DOE 4/8/2016
- Spray foam as an insulation material 9/4/2018
- NEAT/MHEA ECM lifetimes 3/20/2019
- Refrigerators 7/9/2019
- Domestic hot water (DHW) heater replacements 7/9/2019
- Single-Family Solar photovoltaics (PV) as a pilot 9/5/2019
Field guide types approval dates

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<td>Multi-Family</td>
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V.5.2 Energy Audit Procedures
Audit Procedures and Dates Most Recently Approved by DOE

Audit Procedure: Single-Family
Audit Name: 
Approval Date: 2/10/2021

Audit Procedure: Manufactured Housing
Audit Name: 
Approval Date: 2/10/2021

Audit Procedure: Multi-Family
Audit Name: 
Approval Date: 7/3/2019

Comments

All dwellings scheduled for weatherization must have a comprehensive energy audit that treats the dwelling as a whole system. Minnesota has received approval from the Department of Energy to use the current version of Weatherization Assistant (v. 8.11.0.1) through 2026. Prior to that expiration however, Weatherization grantees will migrate to the online version of Weatherization Assistant (WA). Migration to the online version does not require additional approval from DOE.

Weatherization measures for a dwelling are considered cost effective if the Savings to Investment Ratio (SIR) is 1 or greater for each measure and for the job as a whole. In addition to DOE approved conservation measures, Minnesota WAP Service Providers also install health and safety and general (incidental) repair measures as dictated by the audit on each dwelling. Minnesota also uses WA for multifamily audits of all buildings up to four units and up to twenty-four units for specific building types.

V.5.3 Final Inspection

The Minnesota Weatherization Policy Manual specifies the activities and tests that must be completed in a final inspection and the process for rework should the need arise (MN WAP Policy Manual 4.6). Final inspections on weatherized homes are conducted to confirm that all work was done to the SWS standards and in a workmanlike and professional manner. Dwelling units may not be reported as complete until all work passes a final inspection and all required signatures are obtained on the required forms. Each Service Provider or its authorized representative is required to use a certified Quality Control Inspector (QCI) who is in good standing with the Building Performance Institute to conduct all final inspection of all dwelling units. The QCI may oversee and signoff on final inspection duties conducted by non-QCI certified staff related to NEAT data entry, fiscal entry, etc.

At the beginning of each program year, Service Providers will provide Minnesota the names and BPI certification numbers of the QCIs they intend to use for final inspections. Minnesota will maintain a current list of QCIs to ensure that adequate numbers are available to inspect all jobs statewide.

Minnesota uses monitoring forms that are provided to Service Providers prior to monitoring visits (Included in attachments to SF-424). These forms are structured to ensure compliance with the work quality requirements outlined in WPN 22-4 Section 1.

Service Providers will provide QCI-certified inspections according to the following protocol:

Independent QCI: A final inspection on every home will be conducted by a QCI who was not involved in the weatherization work on the home, either as the auditor or as a member of the crew. State field monitoring will be done through Minnesota by a certified QCI. Minnesota will conduct field monitoring visits of at least five percent of all completed units.

Minnesota also conducts desk monitoring to ensure that QCIs are performing final inspections.

QCI Shortage: To meet production goals in a timely manner, Service Providers are responsible for maintaining staff and/or contractual relationships with QCI certified inspectors. In
the case of a shortage of QCI certified inspectors in the service territory, Minnesota may choose to allow the following, in accordance with WPN 20-4:

The QCI certified auditor performs the audit and the final quality control inspection. The auditor is not involved in any of the actual work on the home. In this case, a Minnesota certified QCI or DOE approved representative will perform quality assurance reviews of at least 10 percent of all completed units as this model does not allow for an independent review of the audit on every home.

Additionally, the Service Provider will be required to develop and submit a quality assurance plan to ensure that the individual who is functioning as both the auditor and the quality control inspector is able to consistently perform both tasks. Minnesota may choose to reduce the respective Service Provider Training and Technical Assistance allocation to cover the expense of increased monitoring.

In PY22, Minnesota will also introduce a Quality Control Inspector Mentoring Program. Under this initiative and with prior approval, Service Providers may designate QCI mentees and during the designated time period, mentees may conduct final inspections with oversight from the QCI mentor. The mentor will be responsible for reviewing all mentee’s field inspections and providing on the job training. While this approach is in place, Minnesota field monitors will monitor a minimum of 10% of units inspected by the mentee.

Disciplinary Actions: If a QCI is found to be negligent, either through repeat findings or gross negligence in their duties, Minnesota, with or without the support of a Service Provider, may institute the following:

1. Additional training
2. Temporary suspension (e.g., six months)
3. Permanent suspension and written notification to BPI

V.6 Weatherization Analysis of Effectiveness

Realized energy savings studies

Minnesota is not currently participating in any realized energy savings studies. Because Minnesota has over 200 utilities, bill analysis and comparison is not a feasible strategy for understanding weatherization's effectiveness at this time.

How is the effectiveness of Service Provider weatherization assessed?

Minnesota conducts both administrative and field monitoring, periodic desk reviews, and analysis of each Service Provider. These assessments of effectiveness are conducted through a number of methods: an administrative monitoring tool completed by the Service Provider and reviewed by Commerce staff prior to monitoring, interviews with WAP staff (coordinators, fiscal staff, energy auditors, final inspectors, crews and contractors), onsite visits to homes that have received WAP services, and regular desk monitoring of Service Provider production and spending statuses.

How are training needs being assessed and how are comparisons used in the development of T&TA activities and priorities?

Training needs are assessed in a number of ways. Minnesota conducts surveys with all Service Providers on their anticipated training needs at least twice each year. Minnesota also conducts a risk assessment of each Service Provider annually as part of the contracting process which identifies areas of concern and informs the number and type of trainings offered.

The staff also gathers feedback from Service Providers through email, phone, and regular meetings of the MN Weatherization Advisory Group (MWAG).

If Minnesota determines a Service Provider is not meeting goals, additional monitoring may take place in conjunction with responsive trainings to address barriers. As themes emerge, comprehensive trainings will also be scheduled. All T&TA activities are outlined in section V.8.4.

How is the Grantee incorporating monitoring feedback?

In PY19, Minnesota hosted a DOE technical monitoring visit and continues to implement two key items from that visit: improvement to monitoring processes and identifying specific and relevant trainings and technical assistance opportunities for sub-grantees.

Specifically, in the last two years, the technical monitoring process has been updated to include review of individual audits, Service Provider audit libraries, and audit inputs.

While delayed by COVID-19 safety precautions, Minnesota’s intention is to have field monitors use a combination of observing the Service Provider staff conduct diagnostics tests in the houses monitored and conducting the tests themselves with the goal of independently verifying numbers. Field monitors have started to initiate these procedures and anticipate full implementation in PY22.

Minnesota has also and will continue to incorporate the DOE feedback to implement specific training and technical assistance opportunities. While more detail is provided in the Training and Technical Assistance Plan, these opportunities include energy audit review, library update process and timing, ASHRAE ventilation measurements and calculations, and contractor training on use of the field guide and Standard Work Specifications.

What is the Grantee doing to be on a path of continuous improvement?

In addition to incorporating DOE Monitoring Feedback as outlined, Minnesota incorporates feedback from its Service Provider network as well as review of sub-grantee
Minnesota receives feedback from the sub-grantee network in two ways. Our service provider network meets regularly as the Minnesota Weatherization Advisory Group (MWAG). The co-chairs of MWAG lead these meetings, gather feedback from members and funnel that feedback to the Minnesota WAP Program Supervisor. To close the feedback loop, the Program Supervisor is given the opportunity to address MWAG to respond to feedback or gather additional information as necessary.

Minnesota also gathers information through DOE’s American Customer Satisfaction Index. This feedback is reviewed with the weatherization staff and consideration is given as to how specific items can be improved. Past impacts have included network input on policy development and improved clarity and communication in monitoring activities.

Minnesota also reviews the full scope of monitoring issues encountered by the administrative and field monitors. Where trends or consistent issues are identified, consideration will be given to the appropriate response which may include communication pieces, individualized technical assistance, or formal training. This review may also instigate additional focus in monitoring or additional resources for monitors to provide as technical assistance during visits.

How is the Grantee tracking Service Provider performance reviews?

Minnesota utilizes a monitoring module within the program management software to document issues found through local Service Provider field monitoring visits. The module generates a report that includes required corrections for each household monitored along with a cover letter and summary of observations, compliance issues, and findings. Monitoring reports for all monitoring visits are sent to Service Providers within thirty days, on average, of the monitoring visit. Service Providers make corrections and upload any additional documents in the program management software within an additional thirty days. Minnesota staff then review and either close the issue or ask for additional action. Monitoring reports are stored in the program management software and are accessible to Service Providers and Commerce weatherization staff.

Administrative monitoring is managed in a similar manner outside of the program management software: monitors generate reports based on their visits including corrective steps required, responses are tracked and issues are either resolved or further information or action is requested.

Minnesota seeks to connect the monitoring results directly with required or recommended training or technical assistance during generation of the monitoring report.

If a Service Provider has failed final inspections, how are things improving?

In cases where final inspections have failed, Service Providers require reworks and callbacks of contractors or crews, as appropriate. In addition, technical assistance is offered to individual Service Providers as needed and at times, required. All final inspections are conducted by a certified Quality Control Inspector.

If a Service Provider has management findings or concerns cited as a result of Grantee monitoring or audit proceedings, how are things improving?

Minnesota continues to develop and offer trainings to address monitoring issues. Greater emphasis has been placed on sharing best practices among Service Providers. Past findings are reviewed prior to each monitoring visit. Major monitoring findings or concerns are followed up on until resolution is verified.

In addition, WAP staff work closely with LIHEAP and Minnesota Department of Human Services staff to identify any systematic issues, with consistency and resolution.

Minnesota’s fiscal division reviews third party single audits for all Service Providers. Management decision letters are issued to any Service Provider if the audit indicates findings related to WAP or crosscutting findings that affect the management of WAP. Audit findings or the resolution of prior audit findings could potentially impact future WAP awards to a local Service Provider.

What are the management mechanisms being put in place this year to affect improvement?

In addition to structural changes in PY20 and PY21 which shifted some responsibilities, this program year anticipates the additional development of structures to efficiently address the continuous improvements needs of the Minnesota Weatherization Network.

Are there technical and financial systems that have been reviewed?

Minnesota uses the FACSPro system to streamline many fiscal, administrative, and technical aspects of the program for both Commerce and Service Provider staff. The additional development and implementation of a program management software is solely dedicated to adding efficiency and effectiveness to weatherization work in Minnesota.

What has the Grantee done in the area of market analysis to ensure particular measures are being costed accurately?

Minnesota does not conduct market research as a means of evaluating cost accuracy, rather this evaluation is completed through the monitoring process. Monitors evaluate measure costs for each Service Provider and compares them to similar measure costs seen over the same period statewide.

V.7 Health and Safety

See Attachment

V.8 Program Management
V.8.1 Overview and Organization

The Minnesota Department of Commerce serves as the statewide administrator of Minnesota’s Weatherization Assistance Program (WAP). The Division of Energy Resources includes not only WAP but also the State Energy Program (SEP), Low Income Energy Assistance Program (LIHEAP), and the Conservation Improvement Program (CIP), as well as other energy regulatory departments. Grouping these programs (especially LIHEAP and CIP) provides the best opportunities for coordination of programs affecting low-income households.

In addition to USDOE funds, Minnesota manages LIHEAP and Propane funds for weatherization. USDOE funds are governed by the WAP State Plan. LIHEAP funds are governed by the LIHEAP State Plan and Propane funds are governed by relevant Minnesota statute.

WAP staffing consists of a program supervisor, a leveraging specialist, a data manager, two administrative monitors, four field monitors, a training and technical assistance principal, an outreach and communication specialist, and a program administrator. The Weatherization team is overseen by the State Energy Office Director. Details about these and other positions supporting WAP can be found in the budget.

Minnesota annually contracts for program delivery activities with twenty-three local Service Providers. These Service Providers include Community Action Agencies, tribal nations, a private nonprofit agency, and a community development authority.

V.8.2 Administrative Expenditure Limits

In PY22 Commerce will retain 5.25% of USDOE Program Year funds for statewide program administration. The remaining 9.75% will be allocated to sub-grantees by the allocation formula.

Sub-grantees who receive less than $350,000 in USDOE funds receive up to an additional 5% for administrative purposes. The additional funds will come from sub-grantees’ program allocation and will be inversely prorated according to the amount of USDOE funds received. The higher a sub-grantee allocation, the less the sub-grantee will receive in additional administrative dollars. The prorated formula percent decreases at a rate of 0.5% per $25,000 until the allocation reaches $350,000.

V.8.3 Monitoring Activities

The overall goals of monitoring are to ensure compliance with federal and state rules and policies and establish the efficiency, quality, and effectiveness of Service Provider operations. An additional goal is to identify and correct issues that have the potential to cause major program deficiencies.

Staff with responsibility for monitoring include: the Energy Equity Programs Supervisor, the training and technical assistance principal, field monitors (4), program administrator, and administrative (2) monitors. All field monitors and the training and technical assistance principal are QCI-Certified. Because work with Service Providers has a broader focus than just compliance, TTA dollars support activities in this area. Thirty-seven percent of all admin/TTA funds are allocated for monitoring activities.

Monitoring strategies include the following:

Weatherization Inbox: Service Providers are encouraged to submit weatherization program or policy questions to Minnesota staff via a group email box. Responding to these questions from Service Providers serves two monitoring purposes: reduction in the number of monitoring compliance issues and documentation of technical assistance responses for consistency.

Desk monitoring: Desk monitoring includes ongoing review of monthly programmatic data submitted by Service Providers. Examples of reviewed data include number of units completed, number of units in progress and blower door readings. Fiscal data is also reviewed and includes Service Provider monthly expenses and cash requests against allocations.

Fiscal review also includes audit review and financial reconciliation. Each Service Provider is required to submit their annual single audit no more than nine months after the conclusion of the agency’s fiscal year. Minnesota's Senior Accounting Officer reviews the audits for any internal control issues, crosscutting findings, or management issues. If there are any findings for Federal Programs, the Senior Accounting Officer sends the Service Provider a management decision letter that outlines the findings from the audit report and requests follow up. If Minnesota Department of Commerce is the cognizant agency, this management decision letter is also submitted to other Federal funding agencies.

Administrative Monitoring: Administrative Monitoring takes place to document local Service Providers’ program management, internal controls, and administrative capacity to deliver WAP services.

Field Monitoring: All Minnesota field inspections are conducted by a certified Quality Control Inspector who ensures compliance with the Standard Work Specifications.

PY22 Monitoring Visit Details and Tentative Schedule

A Risk Assessment is conducted prior to the start of the program year to determine priority in monitoring. The Risk Assessment weighs issues like size of allocation, staff expertise and experience, and past monitoring results. For both field and administrative monitoring, additional visits are scheduled, as needed, to address specific Service Provider issues as they arise.
Administrative and Field Monitoring visits are scheduled from August through May to best fit the demands of the program year. Due to COVID19 safety protocols, administrative and some components of field monitoring have been conducted virtually in PY21. Minnesota does not anticipate that changing in the short-term.

Administrative Monitoring

Each Service Provider receives a minimum of one administrative monitoring visit annually. The components of Administrative Monitoring include:

1. Pre-Visit Review

Administrative Monitoring Tool: Service Providers complete an Administrative Monitoring Tool prior to the visit. This Tool gives the monitor information about the approach used by the Provider (contractor vs crew, set price list vs. bidding, etc.) as well as other information on relevant compliance issues.

2. Review

Administrative Monitors review the pre-visit information with Weatherization staff of each Service Provider as well as discuss production, spending, workflow, staffing, and other relevant processes.

These reviews include follow-up on issues raised in desk monitoring and prior monitoring reports, as well as any other issues as needed, including but not limited to:

- Client/Household eligibility
- Distribution of services between renters and owners
- Geographic distribution within the Service Provider service territory
- Reporting compliance
- Internal controls related to financial management and operations
- Fiscal Audits
- Payroll/Personnel
- Vehicles and equipment
- Invoicing
- Staff qualifications and training
- Procurement procedures
- Outreach efforts to incorporate minority and disadvantaged contractors

Household file reviews: Administrative monitors randomly sample files prior to visits to demonstrate compliance with DOE, Minnesota, and local Service Provider policies such as Client/Household eligibility, distribution of service, and adherence to procurement procedures.

Contractor/Crew file review: Administrative monitors randomly sample contractor files to ascertain adherence to contract requirements as outlined in the Minnesota Weatherization Assistance Program Policy Manual (and DOE guidelines).

Monitors conclude the visit with a brief “exit interview” intended to provide Service Provider staff with a high-level review of any issues found during monitoring.

3. Monitoring Report

Monitors review all site documentation, discuss outstanding issues with the monitoring team, and generate a monitoring report. This report includes any compliance issues, recommendations, or best practices. The Service Provider receives the report within 30 days of the Site visit and is asked to respond within an additional 30 days.

In PY22, Minnesota will shift to a Scorecard format for presentation of monitoring findings to Service Provider. This format will incorporate compliance and other issues identified during monitoring visits but also provide Service Provider context as to specific successes of their program, identify specific areas in which to improve performance, and provide information as to a Service Provider’s current position around compliance compared to their peers and identify movement toward improvement. The Scorecard will incorporate both Administrative and Field Monitoring information to best provide an overall picture of each Service Providers delivery of the Weatherization Assistance Program.

Field Monitoring

Each Service Provider receives at least one onsite field visit per year, with a minimum of 5% of all weatherized households monitored statewide. All Minnesota field inspections are conducted by certified Quality Control Inspectors.

1. Pre-Visit Review

Minnesota staff reviews household files for required data, forms, signatures, bids, invoices, and other documentation. Field Monitors also review audits for the households monitored including data inputs and audit library spot checks to determine if they are current.

2. Review

Field Monitors review the pre-visit information with Weatherization staff at each Service Provider. These reviews include follow-up on issues raised in desk monitoring and prior
monitoring reports, as well as any other issues as needed, including but not limited to:

- Administrative field work (Client file review, Work orders, Audit reporting)
- Energy audits
- Fuel costs library accuracy
- Training & Technical Assistance activities and needs
- Weatherization of units
- Health and safety
- Final inspections and verification that all inspections are performed by a QCI
- How monitoring results are handled and required follow-up procedures
- Lead-safe work practices Quality Assurance
- Compliance with Standard Work Specifications (SWS)

Inspections of dwellings: Inspections of completed dwellings are conducted to determine compliance with federal and state requirements, client satisfaction and work quality. Field Monitors also spot check ASHRAE measurements and calculations. Minnesota also may choose to visit "in progress" jobs. All household inspections are completed by a certified Quality Control Inspector.

At the conclusion of the visit, Service Providers are briefed on observations and findings in an exit interview (either in person or virtually). Health and Safety issues are noted at that time, particularly if they present an imminent danger to occupants.

3. Post-Visit Report

Field Monitoring Reports: Written reports are provided to Service Providers within thirty days of the Service Provider visit and include information on compliance issues as well as observations on best practices or client satisfaction.

As noted earlier, Minnesota will shift to a Scorecard format this program year which will include both administrative and field monitoring information. This format will provide Service Providers context as to specific success stories of their program, identify specific areas in which to improve performance, and provide information as to a Service Provider’s current position around compliance compared to their peers as well as identify trends in performance improvement.

Issue Resolution

Once monitors produce the monitoring report, the Service Provider is asked to respond within 30 days. Responses may include correcting individual errors, describing new systems to avoid future errors, or return of funds for disallowed costs. All information about compliance issues and resolution is tracked and documented including the date and number of all visits by the monitors, any findings, concerns, or other issues, and resolution.

Corrective Action/Removal

In the event that a Service Provider remains out of compliance following monitoring or other interventions, Minnesota will follow the Corrective Action Process outlined in the Minnesota Weatherization Program Policy Manual and as noted below.

Minnesota may impose additional requirements on a Service Provider in a written Corrective Action Plan. Corrective Action Plans may be issued in response to single issues of noncompliance or larger internal control, administrative or programmatic issues. Written Corrective Action Plans include:

- Nature of the requirements and why they are being imposed;
- Corrective actions that are needed; and
- Deadline(s) for meeting terms of the Corrective Action Plan.

With or without a Corrective Action Plan in place, Minnesota may take one or more of the following actions in response to noncompliant activity, as appropriate:

- Conduct additional monitoring visits;
- Impose additional training or technical assistance requirements on the Service Provider;
- Require additional, more detailed financial reports;
- Make payments to the Service Provider on a reimbursement basis only;
- Withhold cash payments to the Service Provider, on a temporary basis, pending correction of deficiencies or until stated performance benchmarks are reached;
- Disallow costs for noncompliant activities and/or expenses;
- Suspend or terminate the current contract, either wholly or partially;
- Withhold further contracts with the Service Provider, or;
- Institute other actions as needed.

If a Corrective Action Plan is necessary, Minnesota will work with the Service Provider to resolve issues.

In the case that a Service Provider continues to be out of compliance and with or without a Corrective Action plan in place, Minnesota may impose additional sanctions. These may include additional monitoring visits, financial reporting, training, or technical assistance requirements, or making payments on a reimbursement basis only.
V.9 Energy Crisis and Disaster Plan

The purpose of the Minnesota Disaster Plan is to allow the WAP program to respond quickly and effectively to disasters that affect the lives and dwellings of low-income households. This plan reflects the requirements of WPN 12-7 and will be implemented whenever and wherever there is a federal or state disaster designation. For weatherization purposes, a disaster is determined by a Presidential or Gubernatorial order declaring either a Federal or State Emergency.

Goal: In the event of a disaster, low-income households often incur the greatest hardship and have the least amount of resources available to assist them in recovery. Minnesota’s WAP goal is to assist eligible households, within the confines of WPN 12-7, in restoring their dwellings to the pre-disaster state.

Household Eligibility: Households in disaster areas must meet the same eligibility criteria as other WAP eligible households. WAP rules (10 CFR 440.16(b)) 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. It is permissible to consider households located in the disaster area as a priority as long as the households are eligible, meet one of the priorities established in regulation, are free and clear of any insurance claim or other form of compensation resulting from damage incurred from the disaster.

Dwelling Eligibility: In order for a dwelling to be considered eligible for WAP assistance under this plan it:

- Must be occupied by an eligible household
- Must be in a federal or state designated disaster area, or is located in a county contiguous to the official disaster counties and sustained damage caused by the disaster
- Must be a habitable structure or will be once all work is complete

Either:

- Was an in progress WAP unit at the time of the disaster where already installed materials were damaged or destroyed by the disaster; or
- Was previously weatherized and materials installed with weatherization funds were damaged or destroyed by the disaster.

Priority of Service: Disaster-damaged dwellings will be a priority in designated disaster areas. Both in progress and previously weatherized dwellings are included. This priority designation will last for up to one year, depending upon the circumstances of the disaster, unless determined otherwise by Commerce.

Eligible Activities: The use of USDOE WAP funds is limited to eligible weatherization activities and the purchase and delivery of weatherization materials. All dwellings must have a current energy audit in order to determine which of the following allowed activities are needed and feasible within the parameters of the WAP rules and guidance:

- Securing weatherization materials, tools, equipment, weatherization vehicles or protection of local agency weatherization files, records and the like during initial phase of disaster response
- The cost of incidental repairs to an eligible dwelling unit if such repairs are necessary to make the installation of weatherization materials effective
- The cost of eliminating health and safety hazards which is necessary before the installation of weatherization materials
- Removal of previously installed weatherization and/or health and safety materials that are damaged beyond repair and will be replaced as part of the current activity
- Installation of weatherization materials as described in the State Plan and the MN “Allowed Activities and Measure Type Chart”
Service Providers may use weatherization vehicles and/or equipment to help assist in disaster relief provided the WAP is reimbursed according to the OMB regulations, 2 CFR Part 200.

Work Quality/Inspection: All work must be completed according to the standards contained in the WAP Policy Manual, Standard Work Specifications, and field guides, as well as building, mechanical or other relevant codes. No unit will be counted as complete until all materials are installed in a quality manner and have passed a Quality Control Inspection by Service Provider staff.

Coordination with Other Funds: It is expected that WAP activities will be coordinated with other funded activities to the maximum extent practical. This will not only help make the most prudent and nonduplicative use of all funds but will also help to ensure that service to eligible households will be maximized. However, WAP funds will not be used to supplant other funds such as FEMA and insurance dollars, which must be applied first in renovating disaster-damaged dwellings.

Deferral: Some dwellings may be found to be unsalvageable, uninhabitable, or beyond the scope of the WAP assistance because of a disaster. The Service Provider will carefully evaluate, document, and inform the client in writing of the reasons for the deferral determination.

Required Documentation: Files must contain sufficient documentation to establish the eligibility of the household and dwelling, as well as to justify the work performed, in accordance with Minnesota’s WAP State Plan and WAP Policy Manual. Such documentation includes but is not limited to:

- Household eligibility
- Certification of disaster status (ex: disaster declaration for the household’s county, FEMA letter or habitability document)
- Documentation that all other applicable funds have been used or have been denied prior to the use of WAP funds
- Existing conditions that will be remediated by WAP activities
- Amount of other funds being used in renovation of the dwelling
- Reasons for deferral, where appropriate
- Other, as specified by Commerce

Costs/Averages: While exact costs for work in disaster-damaged dwellings are anticipated to run somewhat higher than the state average cost per unit, Commerce will maintain its statewide average at the same level as it would be if there were no disaster completions. Incidental repairs determined necessary that will exceed the $1,000 per unit limit, will be reviewed by Commerce on a case-by-case basis.
Weatherization Grantee
Health and Safety (H&S) Plan

1.0 – General Information

Additional information that does not fit neatly in one of the other sections of this document.

Acronyms/Definitions:
ECM – energy conservation measure
IRM – incidental repair measure
HSM – health and safety measure
Cost Justified – measure that achieves a savings-to-investment ratio of 1.0 or greater when correctly modeled using the Weatherization Assistant software
Primary System (or system of units) – system that is most relied upon to provide heating/cooling through the season.
Secondary system/unit – employed only in extreme weather

Minnesota has followed the "House as a System" approach to weatherization since 1990. Both Commerce and Service Provider staff understand that health and safety concerns are important because, when addressed, the lives of low-income persons served by the program are improved, especially those that are particularly vulnerable such as the elderly, persons with disabilities and children.

Grantees must develop a policy that includes, at a minimum, the following documentation relating to H&S Plan implementation and maintain signed copies in each client file. Each notification must include the occupant(s) (and landlord if applicable) name and address, be signed and dated by the occupant (and landlord if applicable) indicating that they understand and have been informed of their rights and options, and signed by the Subgrantee personnel collecting the information. Required topics are:

- Occupant Pre-existing or Potential Health Condition Screening
- Provides documentation that allows occupant(s) to self-report known or suspected health concerns as part of initial application for weatherization, during the energy audit, or other part of the weatherization process as specified.
- Must minimally contain the following: Any known risks associated with the measures and materials being installed
- Subgrantee point of contact information for occupant(s)
- Date of screening

Service Providers must defer a dwelling when the health and safety problems are beyond the scope of weatherization activities. Service Providers evaluate each dwelling individually and make decisions accordingly. Commerce staff regularly provide assistance to Service Providers in problem-solving specific situations. All health and safety problems and their resolutions are documented in individual household files.

Assessments of indoor air quality problems are conducted at the time of the energy audit. Because conditions in each dwelling vary greatly, potential remedies are developed on a case-by-case basis. Possibilities might include ventilation or allowable repairs within the scope of weatherization, client education, and/or referrals to other potential fund sources for work that is outside the scope of the Weatherization Program.

Health and safety issues are addressed at a number of levels throughout Minnesota’s Weatherization Assistance Program (WAP). Minnesota’s WAP Policy Manual is incorporated by reference into all grant contracts with Service Providers. The policy manual is updated regularly so it is compliant with current USDOE rules and guidance and the Minnesota State Plan.

Commerce conducts a policy training each year to inform all Service Providers of policy changes for the upcoming program year. In addition, any regulatory/policy updates or new test standards are delivered to Service Providers via email.
Commerce allows Service Providers to budget health and safety costs outside the overall per unit average and monitors statewide averages regularly. Minnesota strives to keep health and safety costs reasonable, recognizing weatherization’s primary goal of energy conservation.

**Pollution Occurrence Insurance:** Commerce strongly recommends Service Providers carry appropriate Pollution Occurrence Insurance.

**Client/building owner notification:** Commerce requires that clients and rental property owners/landlords be notified in writing in all instances where a health and safety issue is found. This includes but is not limited to the issues listed in the remainder of this Plan. Minnesota developed a standard *Notice of a Safety Problem* form that must be signed by the Service Provider, the client and/or landlord and must be included in the client file. Documentation given to the client and/or landlord must include client 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 and under what conditions weatherization could continue, the responsibility of all parties involved, and the client(s) signature(s) indicating that they understand and have been informed of their rights and options.

**Referrals:** In cases where the scope or cost of needed repairs is beyond the range of the weatherization program, Service Providers refer clients to housing rehabilitation programs and other funding sources wherever possible.

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### 2.0 – BUDGETING

Grantees are encouraged to budget H&S costs as a separate category and, thereby, exclude such costs from the Average Cost Per Unit (ACPU) cost limitation. This separate category also allows these costs to be isolated from energy efficiency costs in program evaluations. H&S costs that are budgeted and reported under the Program Operations category rather than the H&S category, the related H&S costs must be included in the calculation of the ACPU and cost-justified through the Grantee’s Department of Energy (DOE)-approved energy audit tool.

Select which option used below.

<table>
<thead>
<tr>
<th>Separate H&amp;S Budget</th>
<th>Contained in Program Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>□</td>
</tr>
</tbody>
</table>

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### 3.0 – H&S EXPENDITURE LIMITS

Pursuant to [10 CFR 440.16(h)](https://www.govinfo.gov/content/pkg/CFR-2009-title10/pag34556.htm), Grantees must establish H&S expenditure limits for their Program and provide justification for those limits by explaining the basis and related historical H&S expenditures. DOE acknowledges that it may be necessary for Grantees to deviate from historical expenditures when certain circumstances arise (e.g. funding source changes).

[10 CFR 440.16(h)(2)](https://www.govinfo.gov/content/pkg/CFR-2009-title10/pag34556.htm) dictates that these limits must be expressed as a percentage of the ACPU. To calculate this percentage use the following formula:

\[
\text{Total Average H&S Cost per Unit} = \frac{\text{H&S budget amount}}{\text{Program Operations budget amount}}
\]

For example, if the ACPU is $5,000 and a Grantee’s Program expends an average of $750 per dwelling on energy-related H&S measures, the Total Average H&S Cost per Unit would equal 15 percent. DOE acknowledges that this percentage may vary significantly between Grantees due to different geographical areas and depending upon the availability of other funding sources, resource availability, etc. Low percentages should include a statement of what other funding supports H&S costs, while larger percentages will require greater justification and relevant historical support.

15 percent is not a maximum limit on H&S expenditures. DOE will conduct a secondary level of review on H&S Plans with a Grantee request of more than 15 percent of Program Operations used for H&S purposes. **DOE strongly encourages using the table below**
**In developing justification for the requested H&S budget amount.** In accordance with 10 CFR 440.18(d)(15), these funds are to be expended by the Program in direct weatherization activities, “of which is necessary before, or because of, installation of weatherization materials.” This same section of the regulation excludes the H&S costs from the ACPU limitation if H&S costs are budgeted separately.

DOE recommends reviewing recent budget requests and compare those to actual H&S expenditures to see if previous budget estimates have been accurate. The resulting Total Average H&S Cost per Unit multiplied by the Grantee’s production estimate in the Annual File should correlate to the H&S budget amount listed in the Grantee’s annual plan.

<table>
<thead>
<tr>
<th>H&amp;S expenditure limits and justification explaining the basis for setting the limits.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The analysis was conducted using the last completed program year (PY20). Commerce is requesting a health and safety average of $1,457.</td>
</tr>
<tr>
<td>Minnesota also utilizes LIHEAP funding to pay for health and safety measures. Service Providers are instructed to manage Health and Safety costs between DOE funds and LIHEAP to maintain an appropriate Average H&amp;S Cost Per Unit.</td>
</tr>
</tbody>
</table>

Utilizing the spreadsheet embedded below, provide a full list of H&S measures using historical data from your program, including average cost, and frequency rate. If installing more than a single instance of one measure in a unit (e.g. multiple CO alarms), Grantees may aggregate costs so that frequency does not exceed 100%, or enter a justification into the measure column, which explains why that measure has a frequency rate of over 100%. The spreadsheet will auto calculate your expected Total Average H&S Cost per Unit.

Instructions: Double-click icon directly below to open, view and edit Measure Matrix Spreadsheet. Complete the spreadsheet by entering the required information. To save, close the spreadsheet and it will save to this document.

![Measure Matrix](Final.xlsx)

### 4.0 – INCIDENTAL REPAIR MEASURES

Any measures that could potentially be identified as H&S but the Grantee chooses to instead identify and treat those measures as incidental repair measures (IRMs), must be implemented consistently throughout the Grantee’s weatherization program. The measure must fit the regulatory definition of an IRM and be cost justified along with the associated energy conservation measure and/or package of measures. 10 CFR 440.3 defines Incidental Repairs as, “those repairs necessary for the effective performance or preservation of weatherization materials.”

<table>
<thead>
<tr>
<th>H&amp;S measures identified and treated as IRMs within your Program.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allowable measures are detailed <a href="#">here</a> in the Allowable Measures Chart found in Appendix C of our MN WAP Policy Manual. This document provides guidance regarding categorizing measures and indicates when designation as incidental repairs is appropriate.</td>
</tr>
</tbody>
</table>

### 5.0 – OCCUPANT PRE-EXISTING OR POTENTIAL HEALTH CONDITIONS AND HAZARD IDENTIFICATION AND NOTIFICATION FORM(S)

Grantees must include policies/procedures for informing clients of the aspects of weatherization that may put a client with pre-existing health conditions at risk during installation of measures. This screening may occur as part of the initial application for weatherization and/or during the energy audit. Procedures must include what steps will be taken and/or available to the client to
ensure that weatherization work will not aggravate pre-existing health conditions. Additionally H&S assessments are required to identify hazards in the home. For those hazards identified, appropriate testing is required when applicable. The client/landlord/property manager must be informed in writing of all testing results, including identification of a hazards revealed by the testing that will lead to deferral/referral.

Grantees are required to develop documentation forms that include at a minimum:

- **Occupant Pre-existing or Potential Health Conditions:**
  - Screen occupant(s) to self-report known or suspected health concerns either as part of initial application for weatherization, during the energy audit, or other parts of the weatherization process as specified;
  - Inform client in writing of any known risks; and
  - Provide client with Subgrantee point of contact information in writing so client can inform of any issues.

- **Hazard Identification Notification Form**
  - The occupant(s) (and Landlord’s, if applicable) name and address;
  - Date(s) of the energy audit/assessment and when the occupant(s) (and Landlord, if applicable) was informed of a potential H&S issue;
  - A clear description of the problem;
  - A statement indicating if, or when weatherization could continue; and
  - The occupant(s) (and Landlord’s, if applicable) signature(s) indicating that they understand and have been informed of their rights and options.

**Procedure for soliciting occupants’ health and safety concerns related to components of their homes**

Weatherization Staff use the Client Participation form to prepare clients for Weatherization Services.

**Procedure for determining whether occupants suffer from health conditions which may be negatively impacted by the act of weatherizing their dwelling**

In PY22, Minnesota will incorporate the requirement to screen occupants to self-report known or suspected health concerns as part of the weatherization process, including informing clients in writing of any known risks and providing clients with the subgrantee point of contact regarding potential health concerns related to weatherization work.

**Procedure for addressing potential health concerns including pre-existing health conditions when they are identified**

Weatherization Staff will be trained in remediation strategies including options for avoiding blowing insulation in the home or departure of the client from the home. On a case-by-case basis, Minnesota allows temporary relocation for client household members for whom being at home during the course of weatherization work would present a health risk or aggravate a pre-existing health concern. Allowable costs include lodging only. Weatherization work should be coordinated to minimize the length of relocation. Accommodations provided will reasonably reflect the prices and availability of the client household’s community. Lodging receipts and the related health concern noted in the Occupant Pre-existing or Potential Health Condition Screening Form will be maintained in the HH file.

**Documentation Form(s) have been included for review?**

<table>
<thead>
<tr>
<th>Yes ☐</th>
<th>No ☑</th>
</tr>
</thead>
</table>

**Location where forms have been uploaded/submitted**

| Separate attachment to SF424 ☐ | Separate attachment to H&S Plan ☑ |

### 6.0 – Health and Safety Categories
For each of the following H&S categories identified by DOE:

- Explain whether you concur with existing guidance from Weatherization Program Notice (WPN) 22-7 and how that guidance will be implemented in your Program, if you are proposing an alternative action/allowability, or if the identified category will not be addressed and will always result in deferral. Alternatives require comprehensive explanations as to how it meets the intent of DOE guidance.
- Where an action/allowability or testing is “required” or “not allowed” through WPN 22-7, Grantees must concur, or choose to defer all units where the specific category is encountered.
- Any activities that are marked as deferral/referrals must contain the H&S reasons specified within the Master File Section V.1.2 Box 5 Deferral/Referral.
- Unless an alternate funding source(s) is declared, utilize DOE funds to address the particular category.
- Describe the explicit methods to address the specific category.
- Describe in detail what testing protocols (if any) used to assess the particular category.
- Define and quantify minimum thresholds that determine minor, major, and limited definitions and the criteria used to make a determination on a case-by-case basis.
- Define “at-risk” occupant(s) and identify minimum documentation requirements for them.
- Client Education activities specific to H&S reasons is required within the Master File Section V.8.4 Training and Technical Assistance of the annual application.
- Training activities specific to H&S reasons is required within the Master File Section V.8.4 Training and Technical Assistance of the annual application.

### 6.1 – Air Conditioning and Heating Systems

<table>
<thead>
<tr>
<th>Concurrence with DOE Guidance</th>
<th>Alternative Guidance</th>
<th>Results in Deferral/Referral</th>
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</thead>
<tbody>
<tr>
<td>Air Conditioning Unallowable with DOE Funds</td>
<td>Heating Unallowable with DOE Funds</td>
<td>Other Funding Source Addresses H&amp;S Issue</td>
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<td>LIHEAP, State</td>
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</tbody>
</table>

Procedure for unsafe or non-functioning primary heating/cooling systems
Heating Systems:
Primary heating systems (space and water heating plants) are evaluated at the energy audit following current testing protocols, and results are recorded in the client file. Any unsafe or non-functional system is corrected (repaired, replaced, or rendered inoperable) before additional work is called for. If an unsafe primary system cannot be corrected, the dwelling must be deferred. All other heating system work must be completed prior to or in conjunction with building shell work following all testing protocols.

All primary heating systems are first modeled in the in Weatherization Assistant for replacement as an ECM. If the replacement measure is not cost justified, a clean & tune measure is evaluated. In the case where the replacement/clean & tune measure is either not cost justified or does not correct the unsafe condition, health and safety funds are used to correct the unsafe situation.

Heating plant replacements require a Manual J calculation based on estimated post weatherization housing characteristics.

In cases where unsafe conditions such as back drafting or high in-flue or ambient carbon monoxide levels are identified by a crew or contractor during the course of weatherization, work that will contribute to the unsafe condition will stop immediately and the WAP Service Provider that issued the work will be contacted and informed of the situation. Together the Service Provider and crew/contractor will take actions to ensure that the dwelling is left in a safe condition.

Air Conditioning:
Minnesota includes Air Conditioning systems in its energy modeling. Minnesota does not repair or replace air conditioners as an ECM, except in the case of multifamily buildings. Minnesota does repair or replace air conditioners as a HSM in any of the following situations:
- medical necessity
- leaking component causes a mold hazard
- leaking component could drip onto a heat exchanger of a heating plant

Minnesota does allow repairs to air conditioning components as an IRM when needed to protect heating plant components from water damage.

Procedure for unsafe or non-functioning secondary heating systems, including unvented secondary space heaters

Heating Systems:
Secondary heating systems (space and water heating plants) are evaluated at the energy audit following current testing protocols and results are recorded in the client file. Any unsafe system is corrected (repaired, removed, or rendered inoperable) before additional work is called for. If an unsafe secondary system cannot be corrected the dwelling must be deferred. Replacement of secondary heating systems is not allowed.

Definition of and documentation required for “at-risk” occupants
The client must provide a signed letter from a medical doctor that justifies the medical need for air conditioning. Medical conditions requiring air conditioning could include but are not limited to asthma, emphysema or heart disease.
Required tests are listed in MN WAP Policy Manual 4.5.3 and Appendix D.

For combustion equipment, a visual inspection of the chimney and flue is conducted. For solid fuel appliances, a visual inspection for soot on building assemblies near the unit or flue is conducted.

### 6.2 – Asbestos (Confirmed and/or Presumed Asbestos Containing Material)

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<td>Alternative Guidance ☐</td>
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<td>Results in Deferral/Referral ☐</td>
</tr>
</tbody>
</table>

- Unallowable Measure with DOE Funding ☐
- Other Funding Source Addresses H&S Issue ☑
- LIHEAP ☑

#### Asbestos on Heating, Ventilation and Air Conditioning (HVAC) systems, distribution, venting and other small surfaces that will be disturbed through the course of weatherization work policy

Space heating systems in single or multi-family dwellings may have components that contain asbestos such as duct and boiler pipe wrap or parts of the heating plant itself. Testing to determine if a material is an ACM is an allowable health and safety expense as is the encapsulation or removal of an ACM under the following conditions:

- **At any point during the WAP process,** if the ACM is friable, it must be encapsulated or removed prior to the resumption of work or blower door testing by a Minnesota Department of Health certified professional, in accordance with the Asbestos Hazard Emergency Response Act (AHERA).

- **If the ACM is intact (not friable) but will be disturbed as part of the WAP work (i.e. duct sealing or heating plant replacement)** it must be encapsulated or removed by a Minnesota Department of Health certified professional in accordance with the Asbestos Hazard Emergency Response Act (AHERA).

Any additional asbestos removal may not proceed without Commerce approval.

In the cases above, the clients are provided with asbestos safety information and are instructed not to disturb the suspected asbestos containing material.

### Asbestos in attics, walls, floors roofs and foundations that will be disturbed through the course of weatherization work policy
Service Provider and contractors will take reasonable and necessary precautions to prevent asbestos contamination in the home. The general abatement of asbestos siding or replacement with new siding is not an allowable HSM. All WAP workers that are removing or reinstalling asbestos siding will follow all working safety protocols as detailed in the SWS.

1-4 Unit dwelling: Asbestos siding, commonly called slate or Transite siding, is assumed to be an ACM unless testing determines otherwise. The presence of slate siding that is in good condition does not prevent the installation of dense packed insulation. To insulate walls in dwellings where asbestos-containing siding is present, the siding must be removed in a manner that allows the siding to remain as intact as possible. Drilling asbestos-containing siding is not allowed. WAP installers are allowed to remove asbestos-containing siding as long as asbestos-safe work practices are performed when doing so. The cost of removal and reinstallation of slate siding can be included in the associate ECM.

After the walls have been insulated, the siding must be reinstalled in a manner that allows the siding to remain as intact as possible. Keeping asbestos-containing siding intact greatly reduces a health risk to workers or clients. Chipped, cracked or brittle asbestos-containing siding may require that walls be insulated from the interior of the dwelling.

5+ Unit dwelling: Dwellings with five or more units fall under EPA asbestos regulations, which have more stringent requirements governing removal. EPA asbestos regulations apply to structures or dwellings used for, or once used for, commercial purposes. Removal of siding from these structures may be allowed once the applicable standards are determined and applied. If removal of asbestos-containing siding is not necessary, other weatherization measures may be applied to these structures.

### Vermiculite that will be disturbed through the course of weatherization work policy

Vermiculite insulation in attics is assumed to be contaminated with asbestos fibers. The Asbestos Containing Material (ACM) test that is utilized for contiguous materials such as heating chamber liners and pipe wrap is not designed to work with a material that is contaminated by friable asbestos, as is the case with vermiculite. Therefore, Commerce does not require Service Providers to test vermiculite.

When vermiculite is present within a home Service Providers may choose from the following courses of actions:

- Defeer the home.
- Utilize non-DOE funds as available to hire a contractor certified by the Minnesota Department of Health (MDH) to remove the vermiculite from the home. The contractor must obtain a permit from MDH and all work done in accordance with MDH asbestos removal protocols. As the MDH only regulates asbestos removal that has tested positive according to the ACM test mentioned above, Commerce requires that all abatement of vermiculite being conducted with non-DOE funds be done so, assuming the vermiculite is positive for asbestos according to the ACM test.

Addition notes on vermiculite:

- The cost for removal of vermiculite insulation is not allowed using DOE funds.
- When deferral is necessary due to the presence of vermiculite, and the homeowner has the vermiculite removed, the homeowner must provide documentation that a MDH certified professional performed the remediation before weatherization work continues.
- All WAP workers operating in areas with vermiculite will follow all safety protocols as detailed in the SWS. The cost of removal is not allowed using DOE funds.
- DOE funds may be used for testing by a MDH certified professional.
- Once asbestos is properly removed, a previously deferred home can be weatherized.
### Blower door testing policy when asbestos/vermiculite is present

Positive pressure blower door testing will be used when vermiculite insulation is present. When a material within the pressure boundary of the dwelling (other than vermiculite) is suspected of being an ACM and is friable, blower door testing is not allowed until the friable material is either confirmed to be a non-ACM or it has been encapsulated or removed in accordance with all applicable rules.

### Testing protocols

A visual inspection of exterior wall surface and subsurface, floors, walls, and ceiling for suspected ACM is conducted during the energy audit and again prior to drilling or cutting.

In dwellings, which contain vermiculite insulation, all vermiculite insulation is assumed to contain asbestos.

Weatherization of a dwelling containing vermiculite may only proceed if an MDH certified contractor removes the vermiculite and the work is done assuming the material is an Asbestos Containing Material.

### Documentation requirements

Safety Assessment Form, MDH Certificate, Photographs

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#### 6.3 – Biologicals and Unsanitary Conditions

(e.g., odors, mustiness, bacteria, viruses, raw sewage, rotting wood)

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<th>Concurrency, Alternative or Deferral/Referral</th>
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<tbody>
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<td>Concurrence with DOE Guidance ☑</td>
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<tr>
<td>Unallowable Measure with DOE Funding ☐</td>
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</table>

**Biological and unsanitary conditions in dwellings policy**
Service Providers are continually alert to potential and actual problems with biological contaminants such as mold, moisture, and rotting wood. Each energy audit contains a sensory assessment of these issues with photos and other documentation such as moisture meter readings, as needed. Auditors and inspectors are trained to identify mold and moisture problems. The presence of large amounts of mold or mildew are grounds for deferral. Service Providers are encouraged to contact Commerce in situations where mold is present in more than isolated areas or where a moisture source is not apparent. Work may proceed in cases where there is a small amount of mold or mildew where the source can be determined and, in the judgement of the service provider staff, can be addressed through a combination of controlling the moisture source and the addition of ventilation (ASHRAE 62.2-2016). Testing for mold, mildew or other biological contaminants or the cleaning of mold are not allowed USDOE expenses. Instructions on general cleaning of small amounts of mold can be provided to the homeowner.

Remediation of conditions that may lead to or promote biological concerns and unsanitary conditions is allowed as an HSM or IRM within Commerce prescribed requirements noted on the most current version of the Allowable Measures Chart and cost averages or limits.

Remediation of odors, viruses or bacteria problems is beyond the scope of weatherization and is not allowed. If a known agent in a dwelling may create a serious risk to occupants or weatherization workers, then deferral may be necessary.

Limited cleaning of the workspace to protect the health and safety of workers and occupants is allowed.

In addition, weatherization installers and contractors are also alert to the possibility that biological contaminant issues, not evident at the time of the energy audit, could arise in the course of installing weatherization materials. If post-audit problems are discovered, crews and contractors are required to notify Service Provider staff to determine if weatherization work can continue.

Basements and crawlspaces can be a source of potential biological contaminants. Auditors are trained to identify and evaluate how best to address each situation and determine allowable measures to address situations or recommend deferral for cases outside the scope of the program.

- Crawlspaces that are physically connected to a building but not within the pressure boundary as determined by pressure diagnostics are not part of the house as a system. Examples include:
  - Foundation under a small entryway
  - Cantilevered floor with vented skirting (site built or mobile home).

- Accessible basements and crawlspaces within the pressure boundary shall have all exposed soil and sump systems covered in accordance with the SWS. The home will have ventilation installed to meet the ASHRAE 62.2 standard. Auditors will evaluate any grading or drainage issues that may cause bulk moisture to enter the home and call for mitigation within allowed measures and cost limits on the allowable measures chart.

**Testing protocols**

Sensory inspection as part of the energy audit, moisture meter testing as needed.

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### 6.4 – Building Structure and Roofing (e.g., roofing, wall, foundation)

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<td>Concurrence with DOE Guidance ✔</td>
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<tr>
<td>Unallowable Measure with DOE Funding □</td>
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**Structural issues in dwellings policy**
As part of the energy audit, a visual assessment of any roofing and/or structural problems along with photos and other documentation is needed. Repairs are allowed in order to protect the safety of clients and installers both during and after the weatherization process. Repairs must be allowable Incidental Repairs as defined by WPN 19-5 and be within the cost limitations as defined by the current DOE state plan.

Dwellings in need of rehabilitation beyond the scope and cost limits of weatherization are referred to other programs and funding sources. Weatherization activities are either deferred until rehabilitation activities are complete or, in some instances, are completed simultaneously with rehabilitation activities.

**Define and quantify minor or allowable structure and roofing issues. At what point are these considered beyond the scope of weatherization?**

Repairs are beyond the scope of weatherization if they involve:
- More than 100 square feet of missing sheetrock.
- Roofing or structural repairs that exceed $400 in material and labor to correct.

**If priority lists are used and these repairs are designated as IRMs, at what point is a site-specific electronic energy audit required?**

Not applicable.

### 6.5 – Code Compliance

**Concurrence, Alternative or Deferral/Referral**

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<th>Concurrence with DOE Guidance</th>
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**Code compliance issues in dwellings policy**

All weatherization work in Minnesota is required to be completed to the standard contained in the applicable code. This applies in places where codes are actively enforced and as a work standard where code enforcement is lacking. Service Provider staff and contractors are expected to be aware of health and safety issues associated with building codes. Correction of pre-existing code compliance issues is not an allowable expense other than where weatherization measures are being conducted. In these situations, the specific code triggering the work must be documented in the client file. State codes must be followed when installing WAP measures.

### 6.6 – Combustion Gases

**Concurrence, Alternative or Deferral/Referral**

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**Combustion gas issues discovered during testing, including those that require an immediate response policy**

In cases where unsafe conditions such as back drafting or high in flue or ambient carbon monoxide levels are identified by a crew or contractor during the course of weatherization, work that will contribute to the unsafe condition will stop immediately and the Service Provider that issued the work will be contacted and informed of the situation. Together the Service Provider and crew/contractor will take actions to ensure that the dwelling is left in safe condition.

**Testing protocols**
Testing of combustion appliances, including heating plants, water heaters, ovens (excluding burners, visual inspection only), and space heaters, is required during the energy audit. Acceptable test procedures are included in the current Minnesota Field Guide, the Minnesota Policy Manual, and supplemental documents that can be found on the Department of Commerce website. The policy manual, field guide, and supplements provide standards that must be met before weatherization can proceed.

The Minnesota Policy Manual requires that naturally drafting appliances are tested for spillage under worse case Combustion Appliance Zone (CAZ) conditions and are verified to be operating safely before and after any weatherization activities that change the pressure balance in the dwelling, such as: air sealing, increasing exhaust ventilation, duct sealing, insulating, etc. Mechanical work must be completed before or in conjunction with air sealing/insulation work. In extreme cases, a family may be asked to leave the dwelling until a problem is remedied. USDOE funds cannot cover costs for temporary relocation in these instances.

Minnesota also requires the measurement and recording of the pressure in the CAZ under worst-case conditions. This information is collected as part of the worst-case CAZ spillage test. The worst-case CAZ pressure is compared to the CAZ limit defined in the SWS for each appliance. Measured CAZ pressures that exceed the CAZ limit may, depending on the situation, require action to correct. Minnesota has developed a detailed procedural document with the help of local building science experts to help guide field staff through the decision-making process around health and safety remediation of CAZ and spillage issues.

As part of the worst-case CAZ test the effect of unsealed return ducts is measured. In cases where return ducts inside the thermal boundary on single-family homes causes a negative pressure, action will be taken to reduce the negative pressure. This is typically done through duct sealing or relief venting between the CAZ and the rest of the house.

Duct sealing within the thermal boundary will be to remediate depressurization concerns.

In addition, an inspection of the venting for all combustion appliances is conducted. All combustion appliances designed to be vented must be properly vented to the outside. When testing indicates an issue with the venting, it will be corrected in accordance with the SWS. If unsafe conditions, whose remediation is necessary to perform weatherization, cannot be remedied by repair or tuning, replacement is an allowable H&S measure. In cases where both repair and replacement is an option, a cost comparison of the options will be included in the client file.

When all weatherization activities are completed, testing is repeated at final inspection. Tests performed at the audit and the final inspection include carbon monoxide in the flue, worst case CAZ spillage, CAZ pressure, and fuel leaks. Every dwelling must pass a worst-case CAZ spillage test during the energy audit, before the installers begin work, daily while completing work, once installers complete work, and again at final inspection.

### 6.7 – Electrical

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<th>Results in Deferral/Referral ☐</th>
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<tr>
<td>Unallowable Measure with DOE Funding ☐</td>
<td>Other Funding Source Addresses H&amp;S Issue ☐</td>
<td>LIHEAP ✔</td>
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**Electrical hazards, including knob & tube wiring, in dwellings policy**
Electrical – Other Than Knob and Tube: Weatherization audits in Minnesota assess and document electrical hazards, especially as they pertain to weatherization activities. Both the policy manual and the field guide contain information on how to identify and address electrical issues. Wires are inspected to ensure that they are not bare or frayed. Service boxes are inspected to ensure that they have secure covers.

Correcting general electrical wiring problems is generally not an allowable weatherization measure. However, instances where electrical issues are directly related to the weatherization process, health and safety funds may be used for repairs. If it is determined that a hazardous situation exists, the problem is corrected before weatherization work commences. If a hazardous situation is discovered during weatherization work, all work must cease until the hazardous situation is corrected.

If repairs are beyond the scope of the weatherization program to address, Service Providers refer clients to rehabilitation programs and other fund sources where possible. A licensed electrical contractor must perform any electrical work needed to correct a problem.

Electrical – Knob and Tube: Minnesota uses health and safety dollars to address knob and tube wiring when it has a direct impact on weatherization activities. Any insulation activities completed where knob and tube wiring is present must conform to applicable codes. Knob and tube wiring repair/replacement in attics and walls is completed before insulation activities begin. In consultation with the Minnesota Board of Electricity, the following protocol has been developed:

• Service Providers must verify if the knob and tube system is in service before proceeding with any additional measures.
• Service Providers must inspect the wiring that will be covered to determine the type(s) of wiring present, the circuit protection, wiring condition, and to identify any other hazards.
• Service Providers must obtain permission from the homeowner or authorized agent to install proper over-current protection. If permission is not given, insulation cannot be installed.
• Install insulation only as follows:
  o In those areas where knob and tube wiring is active, circuits must be protected by properly sized over-current protection;
  o Insulation is to be placed up to a depth of two inches from the underside of the knob and tube wiring, provided that an open-air space is permanently maintained above such wires; OR
  o Barriers must be installed in such a manner around knob and tube wiring to ensure that the insulation shall not directly cover the wiring, and an adequate air space of at least one inch on all sides is maintained.
  o Document whether sidewall cavities are insulated. Sidewalls containing live knob and tube wiring are not allowed to be insulated.
• When knob and tube wiring is replaced it must be done in accordance with all state building codes and statutes.

The presence of knob and tube wiring may dictate that some insulation activities may not be completed. Clients receive education on the dangers and implications of knob and tube wiring in their homes. If knob and tube repairs or replacements are beyond the scope of the weatherization program to address, Service Providers refer clients to rehabilitation programs and other funding sources as feasible.

<table>
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<tr>
<th>Define and quantify minor electrical issues. At what point are these considered beyond the scope of weatherization?</th>
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<tr>
<td>Service providers may make minor repairs to correct hazardous situations for items up to $800 in labor and materials for non-knob and tube electrical work without Commerce approval. In cases where the non-knob and tube electrical hazard is greater than $800, Commerce approval is required. Commerce will consider these situations on a case-by-case basis. Factors considered are total cost, total energy savings of the WAP activities, location of the hazard, status of WAP activities, etc.</td>
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<tr>
<th>Knob and tube replacement in areas where insulation is being installed is allowable. The cost is first considered an IRM when the replacement protects an installed ECM or ensures the effectiveness of an installed ECM. Replacement is considered an HSM measure only if no funds are available for an IRM and it directly poses a health and safety risk to the workers or occupants.</th>
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<tr>
<th>If priority lists are used and these repairs are designated as IRMs, at what point is a site-specific electronic energy audit required?</th>
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<td>Not applicable.</td>
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6.8 – Formaldehyde, Volatile Organic Compounds (VOCs), Flammable Liquids, and other Air Pollutants

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<td>Other Funding Source Addresses H&amp;S Issue ☑</td>
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<td>LIHEAP</td>
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Formaldehyde, VOCs, flammable liquids and other air pollutants in dwellings policy

Describe Guidance Provided To Subgrantees Here

Remove 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.

**Fire Hazards:** All energy audits include an assessment of fire hazards within the dwelling. This assessment may include, but is not limited to, clearances to combustibles, creosote build-up, and storage of flammable materials in proximity to combustion appliances.

Resolution of these types of hazards may include health and safety measures before or during weatherization activities, depending on the nature and severity of the problem. Clients are educated and informed in writing by all Weatherization staff and workers about potential hazards. Inspectors and auditors are trained on fire hazards.

VOCs: Volatile Organic Compounds (VOCs) are widely used as ingredients in many household products, such as paints, varnishes, fuels, and many cleaning, disinfecting, cosmetic, and hobby products. These products can release organic compounds as vapor when they are used and, to some extent, when they are stored.

Formaldehyde is a volatile organic compound found in many building materials and household products, such as new carpets and plywood. These products release organic compounds over time. Organic compounds sometimes have adverse health effects on people. At this time, Commerce does not allow the removal of materials deemed to contain excessive amounts of VOCs. Because of the potential adverse health effects, local Service Providers must take this into consideration when air-sealing and when deciding on the need for ventilation. Clients must be informed and educated about this potential health issue. If it is not possible to control the VOCs, weatherization work must be deferred. Testing for VOCs is not allowed using DOE funds.

6.9 – Fuel Leaks *(please indicate specific fuel type if policy differs by type)*

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<td>Results in Deferral/Referral ☐</td>
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<td>Unallowable Measure ☐</td>
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**Fuel leak remediation protocols**

Fuel leak testing is a require part of all energy audits and QCI inspection. When a minor gas leak is found on the utility side of service, the utility must be contacted before work may proceed. Fuel leaks that are the responsibility of the client (vs. the utility) must be repaired before additional weatherization measures are installed.

**At what point are fuel leaks considered beyond the scope of weatherization?**

Fuel leak repairs that are accessible are an allowable expense. If the leak requires opening a closed building assembly, such as a wall cavity, it is beyond the scope of weatherization and would result in a deferral.

**Testing protocols**

Minnesota follows the combustion gas detection protocols from BPI 1200.

6.10 – Gas Range/Ovens
Concurrence, Alternative or Deferral/Referral

- Concurrence with DOE Guidance ☑
- Alternative Guidance ☐
- Results in Deferral/Referral ☐
- Unallowable Measure with DOE Funding ☐
- Other Funding Source Addresses H&S Issue ☑ LIHEAP

Unsafe gas range/ovens policy

Ovens are tested at the audit in accordance with the current BPI standards and include a combustion test of the oven, a visual inspection of the burners, and gas leak detection where gas lines are accessible. Service or repair is allowable when CO limits are exceeded as detailed in the MN Field Guide. Testing of stovetop burners is no longer allowed. Replacement of stoves is not an allowable DOE expense.

Testing protocols

See Appendix D. of the Minnesota WAP Policy Manual (which referenced the Minnesota Field Guide and the BPI 1200 Standard).

6.11 – Hazardous Materials Disposal [e.g., Lead, Refrigerant, Asbestos, Mercury (including CFLs/fluorescents), etc.] (please indicate where policy differs by material)

Concurrence, Alternative or Deferral/Referral

- Concurrence with DOE Guidance ☑
- Alternative Guidance ☐
- Results in Deferral/Referral ☐
- Unallowable Measure with DOE Funding ☐
- Other Funding Source Addresses H&S Issue ☑ LIHEAP

Hazardous materials disposal policy (existing material/appliance and hazardous material)

When hazardous materials (refrigerant, mercury thermostats, lead paint dust/chips, etc.) are generated in the course of weatherization work, proper disposal is required and removal/disposal costs must be included. Refer to lead and asbestos sections for more information on those topics.

Limited removal of hazardous materials for the protection of workers is required. Limited removal of hazardous materials for the protection of occupants is allowed.

Refrigerant Issues: Refrigerator replacements may be completed using USDOE funds. The cost of disposal of the appliance (including refrigerant) may be included in the replacement measure providing it does not drop the measure SIR below one. If the replacement measure SIR drops below one, the cost of reclaiming the refrigerant may be covered as a health and safety cost. Refrigeration appliances that are replaced must be disposed of according to the environmental standards in the Clean Air Act (1990), Section 608, as amended by the Final Rule, 40 CFR 82, May 14, 1993. The party recovering the refrigerant must possess an EPA-approved Section 608 Type II license or an approved universal certification. Clients should be cautioned not to disturb refrigerant.

Documentation requirements

None

6.12 – Injury Prevention of Occupants and Weatherization Workers (e.g., repairing stairs and replacing handrails)

Concurrence, Alternative or Deferral/Referral

- Concurrence with DOE Guidance ☑
- Alternative Guidance ☐
- Results in Deferral/Referral ☐
- Unallowable Measure with DOE Funding ☐
- Other Funding Source Addresses H&S Issue ☑ LIHEAP

Injury prevention measure(s) policy
Service Provider staff is instructed to be alert to any possible client health issues relevant to a broad range of potential weatherization activities. Energy auditors are the primary staff responsible for identifying such issues, either as a part of the actual energy audit or through required interviews with household members. Because these issues may also arise when they are in the dwelling, installers are also trained to identify health and safety issues. Once an issue is identified, Service Provider staff works with the client to address the hazard either directly through the allowable weatherization activities, referrals, or deferral of work. All issues and efforts to resolve them must be documented in the household file and must include a client signature.

In some instances, uncorrected hazards could result in injury to weatherization workers or preclude the completion of weatherization measures. In these instances, Service Providers are allowed to make repairs with incidental repair dollars to enable weatherization activities to be completed, provided they are within the Allowable Measures Chart and within required cost limits. Photos and other documentation of the hazard are required.

**Crew/Contractor Health and Safety:** The Minnesota Field Guide is incorporated by reference into all Service Provider weatherization contracts with Commerce. The field guide is SWS-aligned and describes Service Provider responsibilities for staff and contractors. The guides address common worker safety issues including vehicle safety, falls, back injuries (proper lifting procedures), exposure to hazardous materials, electrical hazards, repetitive stress injuries, and the use of personal protective gear.

The field guide language requires that local Service Providers and their installers comply with OSHA rules pertaining to worker safety. Service Providers are also required to provide annual training for their crews, auditors, and contractors in all worker and weatherization-related health/safety topics including OSHA 10, HAZCOM 2012, and Confined Spaces training, so that they understand and meet the rules and regulations of the USDOE WAP. Or they may alternatively send them to state-based training to meet this requirement.

Define and quantify minor or allowable injury prevention measures. At what point are these considered beyond the scope of weatherization?

Allowable measures are detailed in the Allowable Measure Chart in appendix C of the Minnesota Policy Manual. Minor is defined as work up to $400 in labor and materials.

| 6.13 – Lead Based Surface Coverings |
| Concurrence, Alternative or Deferral/Referral |
| Concurrency with DOE Guidance ✔ | Alternative Guidance □ | Results in Deferral/Referral □ |
| Unallowable Measure with DOE Funding □ | Other Funding Source Addresses H&S Issue ✔ | LIHEAP |

**Lead safe work protocols**

Appropriate containment and clean up procedures must be used to protect occupants from lead-based surface covering hazards while weatherization work is in progress. Proper notification of the existence of these hazards must be provided to the occupants. Commerce will verify lead safe containment through photos or on-site monitoring.

When weatherization work is in progress the following steps must be followed, as referenced in WPN 22-7:
- Renovations must be completed by Certified Renovation firms.
- Crews and contractors must use containment procedures to ensure protection of the occupants.
- Occupants, especially young children or pregnant women, may not enter the work site.
- Occupants are allowed to return only after the work is completed and the dwelling has passed a visual inspection or a wipe test, if applicable.
- Occupants’ belongings must be protected from lead contamination.
- The work site must be set up to prevent the spread of lead dust and debris.
• Warning signs must be posted at entrances to the worksite when occupants are present; at the main and secondary entrances to the building; and at exterior work sites. The signs must be readable from 20 feet from the edge of the worksite. Signs should be in the occupants’ primary language, when practical.
• The work area must be contained.
• If containment cannot be achieved with occupants in the unit, occupants must move out of the unit or the work must be deferred until containment can be achieved. Minnesota does not use USDOE funds for temporary relocation of clients.
• Measures to ensure that containment procedures do not interfere with occupant and worker egress in the case of an emergency must be established.
• Photos of lead safe work containment procedures and other documentation are required in all dwellings where lead safe work practices are used.

Containment procedures must ensure that any dust or debris will not be spread beyond the work area to non-work areas. The level of containment must be determined by the auditor/inspector or supervisor before work is assigned to a crew or contractor. The level of containment is based on the hazards present, the age of the home, the scope of work activities, and any customer health issues. Lead safe work generally falls into two levels of containment: Level 1 and Level 2 containment and their related standards are outlined in WPN 22-7.

Level 1 containment is required in pre-1978 homes when less than 6 ft² of interior painted surface per room, or 20 ft² of exterior painted surface will be disturbed. Level 1 containment consists of methods that prevent dust generation and contains all debris generated during the work process. The containment establishes the work area that must be kept secure. Measures that may fall within this guideline include:

• Installing or replacing a thermostat
• Drilling and patching test holes
• Replacing HEPA filters and cleaning HEPA vacuums
• Changing a furnace filter
• Removing caulk or window putty (interior)
• Removing caulk or window putty (exterior)
• Removing weather-stripping

Level 2 containment is required when Weatherization activities will disturb more than 6 ft² of interior surface per room, or 20 ft² of exterior surfaces in homes built prior to 1978. Level 2 containment consists of methods that define a work area that will not allow any dust or debris from that work area to spread. Level 2 containment requires the covering of all horizontal surfaces, constructing barrier walls, sealing doorways, covering HVAC registers with approved materials, and closing windows to prevent the spread of dust and debris.

Measures requiring Level 2 containment may include:
• Drilling holes in interior walls
• Drilling holes in exterior walls
• Removing siding
• Cutting attic access into ceiling or knee walls
• Planing a door in place
• Replacing door jambs and thresholds
• Replacing windows or doors
• Furnace replacements

Level 2 containment must always be used where any of the following is conducted, even if the activities will disturb less than the minimum hazard levels within the Level 1 category:
• Window replacement
Demolition of painted surfaces

Proper lead safe work clean-up and disposal of debris is required to adequately clean up the job site. All dust, dirt, material scraps, containers, wrappers, and work-related debris must be removed from the client’s home. A HEPA vacuum must be used to clean up the work areas. Further cleaning may be necessary, based on the hazard. Disposal of debris must meet federal, state and local regulations.

A visual inspection by the crew or contractor must be completed to ensure that the cleaning process is complete. Clearance must be achieved in accordance with RRP rules. Verification is conducted by the QCI at the time of final inspection of the weatherization work. If debris, paint or surface covering chips, or dust is observed, the weatherization crew or contractor must repeat the cleaning process. Client files will contain lead testing documentation, a description of lead work done, the certified renovator certificate, photos of lead safe containment and setup, and any training offered on site. In cases where extensive lead testing will take place to determine whether lead-based paint or surface covering is present, an analysis of the economic feasibility will be conducted by the Service Provider.

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<th>Testing protocols</th>
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<td>EPA approved lead testing</td>
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### Documentation requirements
Notification of a lead hazard must be given to all clients in dwellings that come under the LSW/RRP guidance. All agencies must give each client the lead notification publication, "Renovate Right – Important Lead Hazard Information for Families, Child Care Providers and Schools." A signed certification of receipt of this notice must be present in the client file.

### 6.14 – Mold and Moisture
(e.g., drainage, gutters, down spouts, extensions, flashing, sump pumps, dehumidifiers, landscape, vapor retarders, moisture barriers)

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<th>Concurrency, Alternative or Deferral/Referral</th>
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<td>Concurrency with DOE Guidance ☑️</td>
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### Moisture related issues in dwellings policy

**Drainage:** DOE funds may be used to remedy moisture issues resolved by repair or replacement of gutters, downspouts, grading, flashing, or sump pumps, where the total cost is less than $400. Drainage issues above that cost are beyond the scope of the Weatherization Assistance Program. Homes with such conditions may create a serious health problem and work must be deferred until these issues are addressed by the client or by other funding sources. Clients are notified of such problems in writing.

**Mold and Moisture:** An indoor air quality problem is excess moisture or humidity in a home. Too much moisture may result in moisture penetration, condensation, and build-up in walls and ceilings. Moisture accumulation may also cause wood rot. Too much indoor moisture or humidity can also lead to the growth of mold and mildew which can cause adverse health effects for the occupants. Energy auditors use the following to identify potential moisture problems when assessing a client’s home:

- Damp atmosphere or a musty smell in the dwelling, basement, or crawlspace
- Client complaints of allergy-like symptoms
- Mold growth on walls and ceilings, especially in bathrooms and kitchens
- Mold growth on attic roof sheathing
- Signs of condensation on walls or windows
- Water damage or mold on the underside of roof decking
- Evidence of crawlspace moisture
- Rusted metal in basements, crawspaces, bathrooms and/or kitchens
- Efflorescence (white, powdery deposits) on concrete or masonry surfaces
- Water stains on foundation walls
Although the entire dwelling is inspected for mold, particular attention is paid to the following areas: bathrooms, kitchens, laundry areas, basement walls, ceilings next to exterior walls, attics, and crawlspaces. The mold assessment, completed in tandem with the moisture assessment, is performed by the auditor. Auditors document the presence of visible mold. Details are filed in the client file. The existence of mold is documented to confirm that mold was pre-existing and that weatherization activities were not the cause of mold growth.

When a moisture problem is identified, energy auditors determine the source of the problem and outline solutions or generate specific work order measures to mitigate the problem.

Energy auditors inform clients of any mold that is found and of its location. Auditors explain to clients that the auditor is not a mold expert and that the mold assessment was a visual assessment only and that no testing for mold was completed. Auditors use forms provided by Commerce and the WA software to document and generate specific health and safety measures that address or alleviate moisture problems. Whole Dwelling, Equipment, and Building Shell tabs within WA detail 41 individual remedies, all addressing health and safety concerns. Many of these concerns are related to moisture issues.

Identifying and solving the source of moisture problems is the first priority when a problem is discovered. The following are possible solutions to moisture problems:

**Mechanical Ventilation.** One of the main strategies for solving moisture problems in a home is mechanical ventilation. Installing intermittent or continuous ventilation is allowed and may be paid for with health and safety funds. Moisture problems may be reduced or eliminated by ventilating areas that routinely generate large moisture loads such as bathrooms, kitchens and laundry areas. Commerce requires Service Providers to implement ASHRAE 62.2-2016 on all dwellings weatherized, effective July 1, 2017. Clients are reminded of the importance of using kitchen exhaust fans while cooking and using bathroom exhaust fans after showers or baths. Clients are instructed how to operate the fans properly.

- **Plumbing/Sewer Repairs.** Leaking water pipes and sewer lines cause moisture and pose serious health problems for affected dwellings. Auditors carefully note any problems. Minor repairs, costing less than $400 related to plumbing and sewer repairs, may be completed as a part of the weatherization process, provided the repairs are necessary to weatherize the home. Referrals are made to non-weatherization resources that may assist the household in making more substantial repairs to pipes or sewer lines. Cleanup of any unsanitary conditions due to plumbing leaks is the responsibility of the client.

- **Attic Bypass Sealing.** Attic bypass sealing must be completed on all homes, with the exception of homes that have vermiculite insulation present in the attic. One of the most important benefits of attic bypass sealing is that it prevents the migration of moisture into the attic where it could cause ice dams, wood rot, and mold growth. Pressure diagnostic measurements are taken on both a ‘pre’ and ‘post’ basis to ensure and measure bypass-sealing effectiveness. Bypass sealing is completed as an air-sealing measure when it achieves a SIR of one or more.

- **Health and safety funds are used only in dwellings where necessary bypass sealing has an SIR of less than one.**

- **Crawlspace Ground Moisture Barriers.** Crawlspace moisture can lead to condensation, mold, and rot. Air passing through the soil can contain radon and pesticides. It is important to prevent moisture, radon and other soil gasses from entering the dwelling. This is accomplished by covering the accessible crawlspace ground with a vapor barrier with a perm rating of less than 0.1. This vapor barrier must be installed continuously over the top of the exposed soil with all seams and penetrations sealed to establish a continuous air barrier to seal out water vapor and soil gasses.

- **Bulk Water Control.** Health and Safety dollars may be used to make repairs to deteriorated roofs and other framing members where such repairs are needed to eliminate or prevent moisture or water from entering the dwelling. These repairs are allowed when necessary to address moisture sources that create health/safety hazards in the dwelling. Doors, window sash or total window replacements are not allowable health and safety activities.
Limited Water Damage Repair: Limited water damage repairs that can be addressed by weatherization workers are allowed when necessary to weatherize the home and to ensure the long-term stability and durability of the measures.

**Mold Remediation**: Controlling moisture is critical to controlling mold. If mold is found in a home, it is likely the result of moisture, excessive humidity or water intrusion. Moisture problems must be solved before any mold problem is addressed. If the auditor determines that moisture problems can be solved satisfactorily, the Service Provider may determine that the mold will not be disturbed by weatherization activities and work may proceed without the need for remediating the mold.

The Service Provider may defer any work on the home until the mold is remediated by the client or landlord. This policy is recommended if there are large areas of mold growth. If the auditor determines the moisture problem cannot be satisfactorily eliminated, weatherization work must be deferred.

Mold Clean-up Information and Referral: If the weatherization work can be completed without disturbing mold/mildew, or if cleanup is not required, work may be completed at the discretion of the auditor or program manager. If cleanup is required, information on cleanup procedures will be provided to the client. Information sources for mold clean up include but are not limited to the University of Minnesota Extension Service, FEMA, Minnesota Department of Health, and Canada Mortgage and Housing Corporation.

Procedures are designed to protect the health of the occupants and cleanup personnel during remediation.

### Define and quantify minor or allowable moisture-related measures. At what point are these considered beyond the scope of weatherization?

See Sections above

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#### 6.15 – Pests

**Concurrence, Alternative or Deferral/Referral**

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<th>Results in Deferral/Referral</th>
<th>Unallowable Measure with DOE Funding</th>
<th>Other Funding Source Addresses H&amp;S Issue</th>
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**Pests and pest intrusion prevention policy**

Pest removal is allowed only where infestation would prevent weatherization. Screening of windows and points of access, and incorporating pest exclusion into air sealing practices to prevent intrusion is allowed.

In cases where a pest issue is seasonal, Service Providers are encouraged to defer weatherization until the problem can be resolved. Example: Stinging insects are not active in colder weather so weatherization may be deferred until after temperatures are consistently at or below freezing if stinging insects are found.

If there is a menacing domestic animal in a dwelling or if the worker is uncomfortable around the animal, weatherization workers may require the client to restrain the animal before proceeding with weatherization. If the client refuses, weatherization workers may document the situation and defer the work until the situation is resolved.

Animal bites should be immediately responded to and reported. If necessary, workers should seek medical care. If a worker is bitten by a bat, an attempt should be made to kill the bat without destroying the head. The bat should be placed in plastic and shipped to a local lab to test for rabies.

**Define and quantify pest infestation thresholds. At what point are these considered Beyond the scope of weatherization**

Pest removal is allowed only where infestation would prevent weatherization. Infestation of pests may be cause for deferral where removal costs exceed $400.

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#### 6.16 – Radon

**Concurrence, Alternative or Deferral/Referral**
Radon mitigation is not an allowable health and safety cost. Clients must sign an informed consent form prior to receiving weatherization services. This form must be kept in the client file. In homes where radon may be present, work scope must include precautionary measures based on EPA Healthy Indoor Environment Protocols for Home Energy Upgrades, to reduce the possibility of making radon issues worse where feasible. Whenever site conditions permit, cover exposed dirt floors within the pressure/thermal boundary with 6 mil (or greater) polyethylene sheeting, lapped at least 12” and sealed with appropriate sealant at all seams, walls, and penetrations. Other precautions may include, but are not limited to, sealing any observed floor and/or foundation penetrations, including open sump pits, isolating the basement from the conditioned space, and ensuring crawl space venting is in place or installed. Radon assessments are not part of weatherization in Minnesota. Dwellings with previously identified radon problems should not be left with an increased negative pressure in the contaminated area after weatherization work. Vapor barriers are installed in dwellings with accessible crawlspaces where there is exposed soil.

Testing protocols

Not applicable

Documentation requirements

Client informed consent form is required on all houses.

6.17 – Safety Devices: Smoke and Carbon Monoxide Alarms, Fire Extinguishers

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Unallowable Measure with DOE Funding □ Other Funding Source Addresses H&S Issue □ LIHEAP

Installation or replacement policy for the following safety devices:

Smoke Alarms: Installation of individual or combination smoke and CO detectors and/or alarms is required when absent, inoperable or expired. Replacement of operable non-expired units is not allowed. Service Providers are required to meet State and local fire codes for the number and placement of installed units.

Carbon Monoxide Alarms: CO alarms must be installed where alarms are not present or are inoperable.

Fire Extinguishers: Installation allowed only in cases where solid fuel is burned as part of the primary heating system.

Testing protocols

Units are tested at energy audit by pressing the test button

6.18 – Ventilation and Indoor Air Quality

Concurrence, Alternative or Deferral/Referral

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Version of American Society of Heating Refrigeration and Air-conditioning Engineers (ASHRAE) 62.2 Implemented (optional: identify Addenda used)

2016, no additional addenda utilized.

Procedures for complying with implemented ASHRAE standard

Exhaust fan flow rates are measured at the energy audit and during the QCI inspection. Required tests are detailed in Appendix D of the WAP Policy Manual. The continuous flow setting at the QCI is based on the actual final blower door results. Room to room pressure tests are conducted and action to relieve pressure is taken when the pressure differential between a room and the house is greater than 3 pa.

Testing protocols

Exhaust fan flow rates testing is required to verify compliance with ASHRAE 62.2 standard.

6.19 – Window Repair, Door Repair
## Concurrence, Alternative or Deferral/Referral

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**Window repair and door repair H&S policy**

Window and door replacement, repair, or installation is generally not an allowable health and safety expense. Per WPN 19-5, window and door repairs are allowable H&S expenses to resolve a bulk water intrusion issue that is the cause of visible biological growth.

## 6.20 – Worker Safety (e.g., OSHA)

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**Federal, state and local worker safety requirements policy**

Minnesota Service Providers must comply with OSHA (29 CFR 1910 and 1926) regulations, local health and safety plans, and use of Material Safety Data Sheets. Commerce currently performs monitoring for OSHA rules and regulations, as it pertains to the SWS, when performing monitoring on in-progress units.
# TRAINING AND TECHNICAL ASSISTANCE (T&TA) PLAN

## 1.0 – GENERAL INFORMATION

**Comments that do not generally fit into the available tables below**

The following T&TA activities (T&TA) for both Service Provider and Minnesota WAP staff are instrumental in the provision of weatherization services to low-income households in Minnesota. Minnesota offers comprehensive training through IREC accredited providers and responsive training through a combination of qualified State staff, industry professionals, online trainings and certified trainers. T&TA activities increase the efficiency, quality, and effectiveness of the Minnesota WAP. All T&TA activities have the following objectives:

- **Maximize energy savings.**
- **Ensure the health and safety of low-income households and weatherization workers.**
- **Increase the effectiveness of client education.**
- **Minimize production costs and maximize production efficiencies.**
- **Improve the quality of weatherization work on dwellings.**
- **Improve program management and administrative procedures.**
- **Avoid the potential for waste, fraud, abuse and mismanagement.**

Minnesota retains 65% of the state’s total T&TA allocation for training, planning, oversight, and monitoring activities. The remaining 35% of the state’s T&TA allocation passes to Service Providers. The completion of regular Job Task Analysis (JTA)-aligned comprehensive training is required for staff in all Home Energy Professional (HEP) job classifications. Minnesota verifies through the Service Provider’s Local Plan and Training Activities Report that sufficient training is provided to appropriate staff. While Service Providers are not required to attend all T&TA activities, they are responsible for understanding and implementing any technical and policy content covered in those T&TA activities.

In PY21 Minnesota developed and offered a number of online trainings including: PY21 Policy Update, Minnesota Weatherization Audit Process Review, Cold Climate Air Source Heat Pump Training (paid for with leveraged funds). In PY22 Minnesota will continue to offer online training via its Learning Management System (LMS). Minnesota will offer continuing education credits through its online LMS and where possible at state trainings. Minnesota will also make Service Providers aware of additional resources for continuing education.

T&TA funds may be used to pay for wages of Service Provider weatherization workers during training events.

Service Provider T&TA funds may also be used to provide training to contractors that supports the four home energy professional occupations (retrofit installer technician, crew leader, energy auditor, quality control inspector), including providing a reasonable stipend to contractors who attend WAP training at the request of the Service Provider. All such contractors must sign a contractor training and retention agreement in accordance with DOE guidelines and outlined in Minnesota policy.

Training provided to contractors with WAP T&TA funds are limited to that which support the four home energy professional occupations (retrofit installer technician, crew leader, energy auditor, quality control inspector). The vast majority of energy auditors and quality control inspectors in Minnesota weatherization are sub-grantee employees (approximately 95%). Those energy auditors and quality control inspectors who are contractors (5-6 statewide) participate in certification trainings provided to the weatherization network through Fond du Lac Tribal and Community College under retention agreements with the sub-grantee they are contracted with. Sub-grantees provide training to building shell contractors on a limited basis primarily as it relates to required comprehensive training. The overall amount of TTA funds used to provide training to contractors in Minnesota represents a small portion of TTA funds expended. The need for contractor training
IS LOW AND THE IMPACT ON THE OVERALL T&TA BUDGET IS MINIMAL.

T&TA FUNDS MAY BE USED TO PAY FOR OR REIMBURSE TRAINING FEES AND ASSOCIATED TRAINING COSTS, TRAVEL EXPENSES, CERTIFICATION EXAM FEES, AND STIPENDS. TRAVEL REIMBURSEMENTS MUST BE BASED ON ACTUAL COSTS, THE MINNESOTA MANAGEMENT AND BUDGET “COMMISSIONER’S PLAN,” OR A SERVICE PROVIDERS INTERNAL REIMBURSEMENT POLICY. WHILE MINNESOTA DOES NOT PUT A LIMIT ON EXAM RETAKES COMMERCE STAFF ARE INFORMED OF ALL EXAM RETAKES PROVIDED THROUGH FOND DU LAC TRIBAL AND COMMUNITY COLLEGE. MINNESOTA IS NOT AWARE OF A CONTRACT STAFF THAT HAS RETAKEN AND EXAM MORE THAN ONCE. IT IS VERY RARE THAT AN EXAM IS RETAKEN MORE THAN ONCE AND IN THESE LIMITED CASES FDLTCC HAS WORKED WITH THE SUB-GRANTEE, THEIR EMPLOYEE ON A CASE-BY-CASE BASIS TO ENSURE THAT THE EMPLOYEE IS PREPARED BEFORE ADDITIONAL RETAKES.

T&TA FUNDS MAY ALSO BE USED FOR SERVICE PROVIDER ADMINISTRATIVE STAFF TO ATTEND WEATHERIZATION-RELATED TRAINING.

MINNESOTA UTILIZES LOCAL HOME PERFORMANCE INDUSTRY EXPERTS AS MEMBERS OF OUR POLICY ADVISORY COUNCIL AND AS TRAINERS AT OUR ANNUAL WAP TRAINING CONFERENCE.
A quarterly updated Training Activities Report is submitted by each Service Provider to Minnesota and includes a list of trainings taken by each employee.

On a broader level, T&TA needs, including client education, are assessed in a number of ways:

- Minnesota staff members compile and compare individual Service Provider monitoring results to determine multiagency needs and trends.
- Service Provider surveys are used to elicit input for general policy/procedural issues and T&TA needs.
- The Minnesota Weatherization Advisory Group (MWAG) provides an excellent source of input and feedback regarding T&TA. MWAG membership is comprised of representatives of Service Providers.
- The Policy Advisory Council (PAC) is used to garner input from a broader spectrum of WAP affected constituents within the state.
- Cooperation with other Energy Program units within the Department of Minnesota provides sharing of information about energy conservation issues, some of which may be addressed by T&TA activities.

Evaluation forms are distributed as a part of every group T&TA event. The completed evaluations provide information about the effectiveness of the workshop, class or other group activity. Evaluations may also prompt Minnesota to consider additional training. The results of these evaluations become part of future T&TA needs assessments.

State field and fiscal monitoring visits are also used to evaluate T&TA training effectiveness and to determine specific training that may be necessary.

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**2.0 – Overall T&TA Plan**

Your overall T&TA plan must incorporate suggestions and feedback the following elements.

**Feedback from internal and external reviews, examples include:**

- Feedback from Department of Energy (DOE) Project Officer (PO) monitoring visits
- Internal state audits
- Grantee monitoring of the Subgrantees
- Office of Inspector General (OIG) reports
- American Customer Satisfaction Index feedback, and
- Other. Examples include:
  - Training feedback
  - Training retention activities

- Feedback from Department of Energy (DOE) Project Officer (PO) monitoring visits: In PY21 Minnesota delivered an audit process review training that covered the practical application of accurate energy modelling and accurate costs. In PY22 Minnesota plans to reinforce these topics through policy, guidance and through the PY22 policy update.
- Grantee monitoring of the Subgrantees: In PY22 Minnesota plans to continue to provide remote individualized responsive training based on training needs identified by monitors and sub grantees. Electronic training and technical assistance reporting will streamline training reporting and training.
**American Customer Satisfaction Index (ACSI) feedback:** In response to the ACSI Minnesota will continue to provide online training opportunities and provide responsive training in the “weekly email” and “question of the week.”

**Existing or Planned Accredited Training Center Partnership or Working Relationship.**

Minnesota partners with a number of weatherization training centers through direct contracts and indirectly through an state interagency agreement with Fond Du Lac Tribal and Community College (FDLTCC). Through FDLTCC Minnesota has also partnered with Slipstream (WI) and CHP (VA) to provide comprehensive training. Additionally, Minnesota partners with Saturn Resource Management, EnergySmart Academy, NYSWDA, and the Association of Energy Affordability.

**Preparations for Future/Upcoming Program Requirements, Examples Include:**
- Updated Standard Work Specifications (SWS)
- Migration to online Weatherization Assistant
- Inclusion of specific language from Weatherization Program Notices (WPN)

Minnesota has worked with EnergySmart Academy to create a custom mixed deck of cards field guide (which is based on and references the updated SWS) and was approved by DOE. Additionally, Minnesota purchased Saturn’s SWS aligned field guide as a continued reference material for technical and field staff. Minnesota is working to develop new program management software. This program management software will interact with the energy modeling engine.

**What protocols are in place which ensure untrained staff are not left without supervisions during field operations?**

Minnesota does not require specific certification of Service Provider staff prior to hire. Rather, it is the responsibility of the Service Provider to ensure the qualifications of its hires. Auditors must successfully complete the Building Analyst (BA) from (BPI) within the first year of work. Equivalent certification may be used with approval from Minnesota. The work of new energy auditors must be closely supervised during the course of their training and prior to meeting certification requirements to ensure compliance to program guidelines. In PY21 Minnesota began providing individualized remote training opportunities for all new and existing service provider technical staff. All inspectors must be QCI certified prior to completing inspections for work paid for with DOE funds.

**Partnerships with the Statewide Home Performance Industry on Training Issues; If Applicable.**

Minnesota currently partners with Fond Du Lac Tribal and Community College including use of a test house on their campus approved by BPI for HEP field exams.

**How does analysis conducted, as detailed in Section V.6 of the Annual Application, influence the Development of T&TA Activities and Priorities?**

Individual Service Provider T&TA needs are assessed in four ways:
- Monitoring activities (dwelling inspections, fiscal/administrative, desk monitoring, DOE inspections, and all other types) are used to identify specific areas where improvement is needed. In
ADDITION, INFORMAL CONVERSATIONS WITH SERVICE PROVIDER PERSONNEL, NOT CONNECTED TO MONITORING, ARE USED AS A MEANS OF IDENTIFYING SPECIFIC T&TA NEEDS AT THE SERVICE PROVIDER LEVEL.

- SERVICE PROVIDERS ASSESS THEIR OWN T&TA NEEDS AND OBJECTIVES VIA THE SUBMISSION OF A LOCAL PLAN AS A PART OF THEIR BUDGET.
- MONTHLY DESK MONITORING REPORTS DIRECT RESPONSIVE TRAINING TO SERVICE PROVIDERS TO IMPROVE EFFECTIVENESS AND DRIVE CONTINUOUS IMPROVEMENT.
- EACH SERVICE PROVIDER’S WORK PLAN AND BUDGET ARE REVIEWED AS PART OF THE CONTRACT SUBMISSION PROCESS AND ARE EVALUATED DURING MONITORING ACTIVITIES.

IN PY22 MINNESOTA PLANS TO UTILIZE ITS PROGRAM MANAGEMENT SOFTWARE TO INFORM THE DEVELOPMENT OF TRAINING AND TECHNICAL ASSISTANCE ACTIVITIES:

- AN ELECTRONIC TRAINING AND TECHNICAL ASSISTANCE FORM THAT WILL RECORD MINNESOTA SPONSORED TRAINING AND TECHNICAL ASSISTANCE ACTIVITIES; SERVICE PROVIDERS MONITORING RELATED TRAINING AND TECHNICAL ASSISTANCE ACTIVITIES; AND SERVICE PROVIDER INITIATED TRAINING ACTIVITIES.
- ANNUAL PERFORMANCE AND TRAINING GOALS WILL BE DISPLAYED WITH TRAINING ACTIVITIES BY SERVICE PROVIDER.

MINNESOTA USES THE ABOVE ANALYSIS TO INFORM ITS COMPREHENSIVE AND RESPONSIVE TRAINING OFFERINGS. ADDITIONALLY MONITORS GIVE TRAINING ASSIGNMENTS AND RECOMMENDATIONS TO SERVICE PROVIDERS BASED ON THE RESULTS OF MONITORING VISITS. IN THIS WAY MINNESOTA USES ITS PROGRAM ANALYSIS AND MONITORING EFFORTS TO INFORM ITS TRAINING EFFORTS.

3.0 – WORKFORCE CREDENTIALS

DESCRIBE THE FOLLOWING ASPECTS OF YOUR T&TA PLAN RELATED TO WORKFORCE CREDENTIALS.

FEDERALLY REQUIRED CREDENTIALS. EXAMPLES INCLUDE:

- ENVIRONMENTAL PROTECTION AGENCY LEAD RENOVATION, REPAIR, AND PAINTING PROGRAM
- HOME ENERGY PROFESSIONALS QUALITY CONTROL INSPECTOR CERTIFICATION

- THE HOME ENERGY PROFESSIONAL QUALITY CONTROL INSPECTOR CERTIFICATION IS REQUIRED FOR ALL STAFF INSPECTING WORK PAID FOR WITH DOE FUNDS EXCEPT IN CASES WHERE SUB-GRAnteES HAVE BEEN APPROVED TO HAVE AN INDIVIDUAL STAFF MEMBER PARTICIPATE IN A QCI MENTORSHIP PROGRAM PER WPN 22-4.
- ALL CREW BASED AGENCIES AND BUILDING SHELL CONTRACTORS ARE REQUIRED TO BE AN EPA RRP CERTIFIED FIRM.
- ALL AGENCIES AND CONTRACTORS MUST HAVE AN EPA CERTIFIED RRP RENOVATOR ON SITE AT PROJECTS NEEDING LEAD-SAFE WORK PRACTICES, AS DICTATED BY EPA REQUIREMENTS.
- ALL AGENCY CREWS AND BUILDING SHELL CONTRACTOR JOB-SITE EMPLOYEES WORKING IN WAP HOUSEHOLDS MUST BE TRAINED TO INSTALL MEASURES IN A LEAD-SAFE MANNER IN ACCORDANCE WITH THE SWS AND EPA PROTOCOLS, AND CERTIFIED BY THE EPA AS RRP LEAD RENOVATOR.

GRANTEE/STATE REQUIRED CREDENTIALS. EXAMPLES INCLUDE:

- BUILDING PERFORMANCE INSTITUTE BUILDING ANALYST
- GRANTEE-DEVELOPED CERTIFICATIONS
MINNESOTA DOES NOT CURRENTLY REQUIRE ANY GRANTEE-DEVELOPED CERTIFICATIONS. EQUIVALENT CERTIFICATIONS TO THE BPI BUILDING ANALYST CERTIFICATION (SUCH AS HERS RATER) ARE RECOGNIZED BY MINNESOTA ON A CASE BY CASE BASIS. THE TYPICAL FIRST STEP FOR ENERGY AUDITORS AND QUALITY CONTROL INSPECTORS IS TO GAIN THE BPI BUILDING ANALYST CERTIFICATION, QUALIFYING THEM TO PERFORM ENERGY AUDITS, FOLLOWED BY HEP ENERGY AUDITOR TRAINING AND CERTIFICATION AFTER PREREQUISITES ARE GAINED. MINNESOTA TYPICALLY OFFERS HEP QCI MICRO-CERTIFICATION TRAINING AND EXAMS TWO TO THREE MONTHS AFTER OFFERING THE HEP ENERGY AUDITOR CERTIFICATION AND EXAMS ALLOWING QUALIFIED STAFF TO GAIN BOTH HEP CERTIFICATIONS AS QUICKLY AS POSSIBLE AFTER MEETING PREREQUISITES.

**Subgrantee/Local Required Credentials. Examples Include:**

- **Contractor Licensing**

  All contractors and their subcontractors and crews must be licensed and bonded as required by pertinent laws, ordinances, regulations, or codes.

**Industry Required Credentials. Examples Include:**

- **Equipment/Material Manufacture Certification**
- **Vendor Certification**
  (e.g. Equipment/Material Manufacture Certification, Vendor Certification)

MINNESOTA DOES NOT REQUIRE INDUSTRY REQUIRED CREDENTIALS BEYOND THE BUILDING PERFORMANCE INDUSTRY CREDENTIALS MENTIONED ELSEWHERE IN THIS PLAN.

**Process for Maintaining Workforce Credentials**

MINNESOTA PROVIDES BPI re-certification training and exams to weatherization program staff. MINNESOTA PROVIDES OPPORTUNITIES TO GAIN CERTIFICATION CEUs THROUGH SPONSORSHIP OF LOCAL WEATHERIZATION AND BUILDING PERFORMANCE CONFERENCES. MINNESOTA PROVIDES ONLINE TRAINING THROUGH ITS LEARNING MANAGEMENT SYSTEM THAT WEATHERIZATION STAFF CAN UTILIZE TO GAIN CONTINUING EDUCATION CREDITS. WEATHERIZATION AGENCIES USE TTA FUNDS TO PROVIDE TRAINING FOR THEIR STAFF, INCLUDING ONLINE TRAINING, CONFERENCES AND OTHER TRAINING.

**How Credentials Are Tracked**

MINNESOTA KEEPS RECORD OF THE CERTIFICATIONS AND DATES FOR ALL AGENCY STAFF. MINNESOTA USES THIS INFORMATION TO SCHEDULE AND COORDINATE RE-CERTIFICATION TRAINING AND EXAM OFFERINGS.

### 4.0 — Training

Grantees have two options to describe their training.

**A) Use the embedded spreadsheet* to identify and describe the training schedule for grantee and subgrantee staff. Include technical and non-technical training.**

**B) OR Use the fields below to identify and describe the training schedule for grantee and subgrantee staff. Include technical and non-technical training.**

Grantees are to include the following in their descriptions regardless of what option is being used to describe their training plan:

- Specify whether attendance is mandatory, and the ramifications for non-compliance.
- Specify if the T&TA plan spans multiple program years (PY), indicate which trainings are intended in the current PY and which are planned for future PYs.

*The embedded spreadsheet, if completed at the end of the year to record delivered training, can be used as documentation for the required annual T&TA report. Double click to open spreadsheet. Enter information and close. It will automatically save your information.*
### PROGRAMMATIC/ADMINISTRATION TRAINING

- **FINANCIAL** (i.e. 2 CFR 200)
- **MANAGEMENT** (i.e. 10 CFR 440)

- **OMB Uniform Guidance Training.** Any fiscal staff working with the weatherization program must attend initial training on OMB Guidelines within one year of the hire date. In addition, staff must take refresher courses within one year of changes to the OMB Guidelines. Kevin Myren, a nationally recognized expert in the application of the Uniform Guidance to federally funded nonprofits is available to provide training to our network of service providers. Minnesota offers this training at least bi-annually and in PY21 offered a training that reviewed August 2020 updates.

- In **PY22 Minnesota** will continue to meet regularly with the Weatherization Advisory Group (MWAG); the MN Community Action Partnership (MinnCAP) directors meeting; and the Fiscal Directors in order to keep the weatherization network up to date with program developments and reinforce Minnesota policy.

- In **PY22 Minnesota** will continue to encourage program coordinators and administrative staff to utilize NREL’s WAP Administrative Training.

- In **PY22 Minnesota** will continue to provide annual and mid-year policy updates to service providers.

- Unless otherwise noted, Service Providers are not required to attend all T&TA activities although they are responsible for understanding and implementing any technical and policy content covered in those T&TA activities.

### COMPREHENSIVE TECHNICAL TRAINING Aligned to the Job Task Analysis (identify at what intervals workers will receive regular, comprehensive training as required by Weatherization Program Notice (WPN) 15-4)

- **Quality Control Inspector**
- **Energy Auditor**
- **Crew Lead**
- **Retrofit Installer/Technician**

**PY22 Comprehensive trainings** include JTA-aligned Crew Leader, Retrofit Installer, Energy Auditor and Quality Control Inspector trainings to reflect industry-wide initiatives and broaden the skills necessary to successfully maintain quality work in the WAP. Minnesota will continue to address recent changes to the HEP Energy Auditor and QCI certification scheme.

Because it is unknown if and how the impact of COVID-19 on travel and large group gatherings will extend into **PY22**, Minnesota will continue to expand its distance learning and remote meeting options with the intention of being able to quickly pivot to remote training and meeting options as circumstances require. As Minnesota plans andprocures in person trainings in PY22, it will build remote training options into its contracts.

Unless otherwise noted, Service Providers are not required to attend all T&TA activities although they are responsible for understanding and implementing any technical and policy content covered in those T&TA.
ACTIVITIES. WHILE ATTENDANCE AT BPI BA AND BPI HEP TRAININGS IS NOT REQUIRED, THESE CERTIFICATIONS ARE REQUIRED AND SERVICE PROVIDER STAFF MOST OFTEN TAKE ADVANTAGE OF THE OPPORTUNITIES PROVIDED BY MINNESOTA TO ACHIEVE THESE CERTIFICATIONS. SERVICE PROVIDERS HAVE OCCASIONALLY PROVIDED CERTIFICATION TRAINING AND TESTING INDEPENDENTLY DUE TO SCHEDULING CONFLICTS, BUT THIS IS UNCOMMON.

COMPREHENSIVE TRAINING IS REQUIRED EVERY 3 YEARS FOR ENERGY AUDITORS AND QCI AND EVERY 5 YEARS FOR RETROFIT INSTALLERS AND CREW LEADERS.

ANALYSIS OF TRAINING NEEDS FOR WEATHERIZATION WORKERS

QUALITY CONTROL INSPECTOR (QCI)

AS OF THE END OF THE THIRD QUARTER OF PY21, MINNESOTA WAP HAS 53 QCI CERTIFIED INDIVIDUALS IN ITS STATEWIDE NETWORK AS WELL AS FIVE QCI CERTIFIED INDIVIDUALS IN ITS STATE STAFF. ALL SERVICE PROVIDERS CURRENTLY HAVE ACCESS TO A QCI THROUGH DIRECT EMPLOYMENT OR A CONTRACTUAL AGREEMENT. MINNESOTA WILL OFFER QCI TRAINING AND WRITTEN EXAMS SOON AFTER THE HEP ENERGY AUDITOR TRAINING AND EXAMS ARE OFFERED. DEPENDING ON HIRING THIS IS ESTIMATED TO BE 2-3 TRAINING IN PY22. THE NEED FOR QCI TRAINING IS MODERATE.

ENERGY AUDITOR (EA)

IN PY21, 16 NEW STAFF TOOK AND PASSED EA TESTING AND CERTIFICATIONS. THERE ARE CURRENTLY ~28 BPI BUILDING ANALYST CERTIFIED STAFF READY TO CHALLENGE THE HEP ENERGY AUDITOR CERTIFICATION EXAMS IN PY22. IN PY22 MINNESOTA ANTICIPATES THAT SERVICE PROVIDERS WILL HIRE UP TO 20-30 NEW ENERGY AUDITORS AND PLANS TO PROVIDE UP TO FIVE BPI BUILDING ANALYST COURSES AND EXAMS FOR THESE NEWLY HIRED STAFF AND UP TO THREE HEP ENERGY AUDITOR COURSES AND EXAMS FOR CURRENT ENERGY AUDITORS. IN PY22 MINNESOTA EXPECTS TO OFFER EA FIELD TESTING TO EXISTING EAs.

CREW LEADER (CL) AND RETROFIT INSTALLER (RI)

FOR BUILDING SHELL WORK, MINNESOTA HAS SIX CREW BASED SERVICE PROVIDERS AND THE REMAINING 17 ARE CONTRACTOR BASED. WHILE CREW BASED AGENCIES CONSISTENTLY SEND THEIR STAFF TO OFFERED TRAININGS, AGENCIES THAT UTILIZE CONTRACTORS HAVE HISTORICALLY HAD DIFFICULTY CONVINCING BUILDING SHELL CONTRACTORS TO ATTEND JTA-ALIGNED TRAININGS IN SPITE OF OFFERING STIPENDS. IN PY22, MINNESOTA WILL ADDRESS THE WPN 22-4 SECTION 4 REQUIREMENT THAT BUILDING SHELL CREWS AND CONTRACTORS RECEIVE JTA-ALIGNED TRAINING BY REQUIRING PARTICIPATION IN TWO JTA-ALIGNED TRAINING ANNUALLY. IN PY22, CONTRACTOR TRAINING WILL ALSO INCLUDE REVIEW OF THE DOE STANDARD WORK SPECIFICATIONS (SWS) AND MINNESOTA’S SWS DECK OF CARDS FIELD GUIDE. MINNESOTA IS CONSIDERING THE POSSIBILITY OF ADDING A BADGES PROGRAM FOR FIELD STAFF.

MULTIFAMILY: ALL FOUR JOB TITLES

IN PY22, MINNESOTA AGAIN PLANS TO OFFER A MULTIFAMILY QCI GAP TRAINING.

ANTICIPATED INTERVALS FOR COMPREHENSIVE TRAINING FOR WEATHERIZATION WORKERS

TO ADDRESS STAFF TURNOVER, MINNESOTA ANTICIPATES OFFERING HEP ENERGY AUDITOR AND HEP QCI TRAINING AT REGULAR INTERVALS. CURRENT STAFF WHO HAVE ACHIEVED CERTIFICATIONS FOR THEIR JOB CLASSIFICATIONS WILL ALSO RECEIVE REGULAR COMPREHENSIVE TRAINING.

QUALITY CONTROL INSPECTOR
Since the QCI certification is required by DOE, Minnesota anticipates the need to offer up to three sessions of QCI training and written testing for new QCIs each program year. Comprehensive training aligned to the QCI JTAs will be provided annually to existing QCI certified staff.

Energy Auditor

Since the EA certification is now required to obtain the QCI certification, Minnesota plans to provide regular comprehensive training up to three times annually to provide a path to QCI certification for new staff. Comprehensive training aligned to the EA JTAs will be provided annually to existing EA-certified staff.

Crew Leader and Retrofit Installer

Since the implementation of the Standard Work Specifications, Minnesota has found an overall decrease in monitoring findings related to work quality. That being said Minnesota still finds variability by service provider and contractor in terms of air sealing results. Additionally, some service providers still express concern that their crews and contractors are not fully confident with mobile home weatherization. In PY22 Minnesota will focus comprehensive training efforts for these crew leaders and retrofit installers on air sealing and mobile home weatherization through a combination of service provider-led, online, and onsite training.

Crew Leader

Since the Crew Leader (CL) certification is not required by DOE at this time, Minnesota plans to provide annual online-training for all crew leaders.

Retrofit Installer

Since the Retrofit Installer (RI) certification is not required by DOE at this time, Minnesota plans to provide regular online-training for all crew leaders. Comprehensive training aligned to the RI JTAs will be provided annually to existing crew and contractors.

Multifamily

Minnesota plans to provide multifamily QCI gap training to QCI certified individuals to meet program requirements annually or biennially based on need.

Specific Technical Training

- Topics identified during monitoring visit(s)
- Energy Modeling
- Health & Safety. All H&S topics in WPN 22-7 require some level of training for all affected workers, the frequency of this training is a grantee decision. Examples include:
  - Air Conditioning and Heating Systems
  - Asbestos
  - Biologicals and Unsanitary Conditions
  - Building Structure and Roofing
  - Code Compliance
- Combustion Gases
- Electrical
- Formaldehyde, Volatile Organic Compounds (VOCs), Flammable Liquids, and Other Air Pollutants
- Fuel Leaks
- Gas Range/Ovens
- Hazardous Materials Disposal
- Injury Prevention of Occupants and Weatherization Workers
- Lead Based Paint
- EPA’s Lead Renovation, Repair & Painting Program (RRP)
- Mold/Moisture
- Pests
- Radon
- Safety Devices
- Ventilation and Indoor Air Quality
  - American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE)
- Window Repair, Door Repair
- Worker Safety
  - OSHA
- Additional topics as described in Health & Safety Plan
  - Client Education (training workers to conduct client education). Examples include:
    - Energy Savings Strategies
    - Program-specific information. Examples include:
      - What to Expect
      - Additional Resources
  - Health & Safety Issues

**BPI Healthy Home Evaluator:** In PY22 Minnesota will make efforts to connect service provider staff to BPI Healthy Homes Evaluator trainings and may offer dedicated training to service provider staff if demand dictates.

**Health and Safety Training:** Minnesota has developed a health and safety curriculum based on WPN 22-7 and Minnesota WAP policy and during PY20 an online training is being developed using this curriculum. It is anticipated that this training will be available for Minnesota Staff July 1, 2022.

**Mechanical Systems/CAZ Training:** A three-day course covering topics such as refrigeration, combustion, and CAZ depressurization testing, ventilation, and multifamily HVAC will be offered to service providers utilizing Minnesota specific training materials. This training will be offered up to three times this year.

**Program Software Introduction and Implementation:** Tools for a Successful and Seamless Program Year. This year’s policy updates will focus on changes brought about by the program management software.

**Minnesota Weatherization Assistant Audit Tool Review:** This training will review the single family and mobile home audit tool approved February 2021. This training will reiterate the importance of accurate audit data entry to ensure accurate energy modelling. The training will also include the requirement to model cooling in Weatherization Assistant; to use “evaluate all” for heating systems and windows; air infiltration reduction best practices; when health and safety duct sealing is appropriate; the importance of site maps, field notes, and robust data collection; and when refrigerator metering is required.
**REMOTE INDIVIDUALIZED RESPONSIVE TRAINING AND TECHNICAL ASSISTANCE:** MINNESOTA PLANS TO PROCUCE THE SERVICES OF A TRAINER OR TRAINING ORGANIZATION TO PROVIDE INDIVIDUALIZED RESPONSIVE TRAINING AND TECHNICAL ASSISTANCE TO NEW AND EXPERIENCED SERVICE PROVIDER STAFF STATEWIDE.

**MULTIFAMILY WEATHERIZATION TRAINING AND TECHNICAL ASSISTANCE:** MINNESOTA WILL PROCUCE THE SERVICES OF A TRAINER OR TRAINING ORGANIZATION TO PROVIDE INDIVIDUALIZED RESPONSIVE TRAINING AND TECHNICAL ASSISTANCE TO SERVICE PROVIDERS WEATHERIZING 5+ UNIT MULTIFAMILY BUILDINGS.

**CONTRACTOR/Crew TRAINING:** MINNESOTA WILL PROCUCE THE SERVICES OF A TRAINER OR TRAINING ORGANIZATION TO PROVIDE TRAINING TO BUILDING SHELL CONTRACTORS AND CREWS. MINNESOTA IS CONSIDERING DEVELOPING A BADGES PROGRAM FOR BUILDING SHELL CONTRACTORS AND CREWS.

**NEW STAFF TRAINING MINNESOTA WAP ORIENTATION:** IN PY22 MINNESOTA WILL OFFER NEWLY HIRED SERVICE PROVIDER STAFF, INCLUDING AMERICORPS VOLUNTEERS, WITH ORIENTATION TRAINING THAT INTRODUCES NEW STAFF TO BUILDING SCIENCE CONCEPTS AND MINNESOTA WEATHERIZATION PROGRAM REQUIREMENTS.

**COLD CLIMATE HEAT PUMP TRAINING:** IN PY22 MINNESOTA WILL DELIVER ADDITIONAL COLD CLIMATE HEAT PUMP TRAINING TO SERVICE PROVIDERS. MINNESOTA WILL ALSO PROVIDE AN INITIATION TO COLD CLIMATE HEAT PUMP HVAC CONTRACTORS WORKING IN WAP.

**ADDITIONAL RESPONSIVE TRAINING ANTICIPATED FOR PY22: REGIONAL OR STATE ENERGY CONFERENCE**

Service providers will be responsible for costs related to:
- Travel and labor related to state sponsored comprehensive and specific training
- LSW and Lead Renovator training and certification
- Continuing education credits for any relevant certifications (e.g. QCI or Building Analyst)
- Additional comprehensive and specific training not available through Commerce
- Contractor stipends, if any

Service Providers will provide a T&TA budget as part of the contracting process that communicates a thorough plan to expend all T&TA funds in an effective manner.

**Conferences. Examples include:**
- Energy OutWest
- Building Performance Association
- National Association for State and Community Service Providers
- Community Action Partnership
Minnesota is hopeful the annual State Energy Conference, which is organized by a service provider working group will be held in May of 2023. As it regularly has, Minnesota plans to sponsor this conference and help develop the conference content so it aligns with Minnesota’s training objectives.

National Weatherization Conferences: Minnesota approves out of state travel requests from service providers for national conference attendance based on availability of funds and the relevance of conference content for weatherization staff including the National Home Performance Conference and Energy OutWest.

Minnesota regularly sends state staff to the fall and winter conferences sponsored by the National Association of State and Community Service Providers.

### 5.0 – Technical Assistance

**Describe the technical assistance activities included in the T&TA budget category.**

#### Programmatic/Administration Support

Minnesota provides regular responsive training and technical assistance through the weatherization email inbox, including over 500 individual requests each program year. Additionally, Minnesota provides technical assistance through phone calls, monitoring events, and mid-year calls.

#### Technical Support

Minnesota provides program management software support through a separate email address administrated by the software provider that is forwarded to the weatherization email inbox so that Minnesota staff are aware of all technical assistance requests. Additional technical support is provided though phone calls and monitoring events.

#### Health & Safety Support Activities

Minnesota has developed a health and safety curriculum based on WPN 22-7 and Minnesota WAP Policy and during PY20 an online training was developed using this curriculum. This training is now available on the Minnesota Weatherization LMS. Additional health and safety support is provided though phone calls, monitoring events and the weatherization email inbox.

#### Monitoring

**What percentage of T&TA funding is allocated to monitoring? (If defined in section B of the budget details within the annual application, include that within your description below.)**

Thirty two percent of T&TA funding is allocated to Monitoring.

### 6.0 Client Education

**Describe what current and planned client education materials and/or activities are included in the T&TA budget category. Only those paid for with T&TA funds need to be mentioned.**

**Note:** This does not include training workers to deliver client education. This should be described in the training section, above.

Client education activities prior to, during and after weatherization which address the weatherization process and energy savings details.
**MINNESOTA WEATHERIZATION STAFF PROVIDE CLIENT EDUCATION THROUGH REQUIRED CLIENT FORMS. IN ADDITION THE FOLLOWING WRITTEN RESOURCES ARE AVAILABLE AS APPLICABLE.**

- [HOME ENERGY GUIDE (.pdf)](#)
- [BE ENERGY SMART AND DO YOUR PART (.PDF)](#)
- [RENOVATE RIGHT BROCHURE GUIDE](#)
- [YOUR WEATHERIZATION PROJECT (.PDF)](#)
- [CLEAN FANS WORK BETTER (.pdf)](#)
- [SOME BASIC ENERGY-SAVING TIPS FOR THE HEATING AND COOLING SEASONS (.PDF)](#)

Additionally during PY21, Minnesota released a series of animated client education videos, that provide information about weatherization services, the process of having one’s home weatherized, and building science and health and safety related information.

### CLIENT EDUCATION ACTIVITIES REGARDING H&S ISSUES AS INDICATED IN WPN 22-7

- Air Conditioning and Heating Systems
- Asbestos
- Biologicals and Unsanitary Conditions
- Building Structure and Roofing
- Code Compliance
- Combustion Gases
- Electrical
- Formaldehyde, Volatile Organic Compounds (VOCs), Flammable Liquids, and Other Air Pollutants
- Fuel Leaks
- Gas Range/Ovens
- Hazardous Materials Disposal
- Injury Prevention of Occupants and Weatherization Workers
- Lead Based Paint
- EPA’s Lead Renovation, Repair & Painting Program (RRP) Mold/Moisture
- Pests
- Radon
- Safety Devices
- Ventilation and Indoor Air Quality
  - American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE)
- Window Repair, Door Repair
- Worker Safety
  - OSHA
- Additional topics as described in Health & Safety Plan
### Client Education Activities Regarding H&S Issues as Indicated in WPN 22-7

- **Air Conditioning and Heating Systems:** Verbal or written material covering operation, maintenance, and how to identify health and safety concerns. In cases of installations, all manuals are provided to the homeowner. In cases where bulk fuel tanks are not removed as part of weatherization, written or verbal instruction of proper disposal is provided.

- **Asbestos (All):** Clients are informed in writing of any suspected ACMs that will be disturbed during the weatherization process and the precautions that will be taken to ensure the occupants and workers safety through the weatherization process. If testing of a suspected ACM is conducted, the owner will be informed in writing of the results; (Vermiculite): If testing of a suspected ACM is conducted, the owner will be informed in writing of the results; and (On pipes, furnaces, and other small covered surfaces): If testing of a suspected ACM is conducted, the owner will be informed in writing of the results.

- **Biologicals and Unsanitary Conditions:** The energy auditor will review any findings from the audit.

- **Building Structure and Roofing:** Any situations discovered during the energy audit that would require deferral or correction are reviewed with the client and documented on the appropriate form or scope of work.

- **Code Compliance:** Any situations discovered during the energy audit that would require deferral or correction are reviewed with the client and documented on the appropriate form or scope of work.

- **Combustion Gases:** Combustion safety is a topic that energy auditors discuss with clients after the energy audit.

- **Electrical:** When this hazard is identified, it is reviewed with the client and noted on the Safety Assessment form.

- **Formaldehyde, Volatile Organic Compounds (VOCs), Flammable Liquids, and other Air Pollutants:** When this hazard is identified, it is reviewed with the client and noted on the Safety Assessment form.
**ASSESSMENT FORM.**

- **FUEL LEAKS:** When this hazard is identified, it is reviewed with the client and noted on the Safety Assessment Form.
- **GAS RANGE/OVENS:** When this hazard is identified, it is reviewed with the client and noted on the Safety Assessment Form.
- **HAZARDOUS MATERIALS DISPOSAL:** When this hazard is identified, it is reviewed with the client and noted on the Safety Assessment Form.
- **INJURY PREVENTION OF OCCUPANTS AND WEATHERIZATION WORKERS:** Energy auditors will work with clients to address client injury prevention related to weatherization work including issues related to deferrals and pre-existing conditions.
- **LEAD BASED PAINT:** If lead testing is conducted, the owner will be informed in writing of the results. The Renovate Right Pamphlet is provided to all clients who live in homes built prior to 1978 to ensure they are aware of EPA’s Lead Renovation, Repair & Painting Program (RRP).
- **MOLD/MOISTURE:** Auditors provide one-on-one general education to all clients regarding high indoor moisture levels or actual moisture penetration, including the cause of moisture problems and how to avoid moisture problems. Clients are taught how to maintain acceptable relative humidity levels in the dwelling and how to operate any newly installed bath and/or kitchen fans. Energy auditors educate clients on moisture if they identify practices that might result in high moisture levels in the home. Energy auditors are encouraged to utilize moisture meters to help quantify the moisture content of suspect building components. The following are client practices which may have an effect on the moisture levels:
  - Cooking and use of kitchen exhaust fans
  - Bathing, showering and use of bathroom exhaust fans
  - Proper use and placement of humidifiers and dehumidifiers
  - Indoor plants
  - Aquariums
  - Storage of firewood inside the dwelling or attached garage
  - Plastic window covers
  - Keeping gutters clean
  - Leaky plumbing or fixtures
  - Site drainage
  - Sump Pumps

**Correction of moisture and mold-creating conditions are allowed when it is necessary to ensure the long-term stability and durability of the measures in weatherizing the home. Minnesota therefore allows the treatment of moisture sources and drainage issues when such actions are either necessary to effectively perform weatherization work to ensure the work will be lasting and effective or are necessary, as a result of weatherization work, so as not to create a health or safety problem for the occupant. Activities, as outlined in WPN 22-7 are limited to those that are conducted where efficiency measures are identified for installation. Installation of these items must be pre-approved by Minnesota. If moisture problems in a dwelling are severe and cannot be resolved under existing allowable health and safety measures or repair allowances, Service Provider auditors must explain to clients that weatherization measures could make the situation worse (e.g. attic and wall insulation and high-efficient furnace installation) and may not be completed until moisture problems are remedied by the client or landlord. Weatherization measures that do not disturb mold or exacerbate existing moisture problems may be completed with prior approval from Minnesota in certain circumstances.**

- **PESTS:** Client education videos inform clients that energy auditors will inform them of the presence of the evidence of pests; whether program funds can be utilized to remediate; and if
OTHER COMMUNITY RESOURCES ARE AVAILABLE TO THE CLIENT.

- **Radon:** If radon testing is conducted, the owner will be informed in writing of the results. Energy auditors review the Confirmation of Receipt of A Citizen’s Guide to Radon Pamphlet form with clients at the energy audit.

- **Safety Devices:** Energy auditors are required to educate the client on operating procedures, care and replacement of units.

- **Ventilation and Indoor Air Quality:** Clients are presented with information on combustion safety and hazards, including the importance of using exhaust ventilation when cooking as a part of client education on combustion appliances. Client education is conducted during the QCI and includes information on the location of service switches and cleaning of any ventilation equipment installed to meet the American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE) 62.2 ventilation standard.

- **Window Repair, Door Repair:** Client education videos emphasize that window and door repair are not typical in WAP and almost always limited to windows or doors that are broken or not structurally sound.