



U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



Weatherization Assistance Program Ensuring the Technical Integrity of Your Program



Derek Schroeder, DOE
Paul Donnelly, WI DOA
Kelly Cutchin, SMS
NASCSP Newcomers Orientation
March 2017

Before we begin...

Some general advice:

- Timeline of process.
- Identify team strengths.
- Communicate with Project Officer.
- Read application instructions.
- Answer questions accurately.

Requirements may feel like a cage...

10 CFR 440

WPN 11-6



Application Package

WPN 15-4 Quality Work Plan

...but they're really a choose your own adventure.



Application Sections

- **V.5.1** Technical Guides and Materials
- **V.5.3** Final Inspection
- **V.6** Weatherization Analysis of Effectiveness
- **V.8.3** Monitoring Activities
- **V.8.4** Training and Technical Assistance

Session Approach

Section by section of application:

- Overview of DOE requirements
- See how they do it in Wisconsin
- Describe other approaches we've seen around the country

The Wisconsin Weatherization Assistance Program

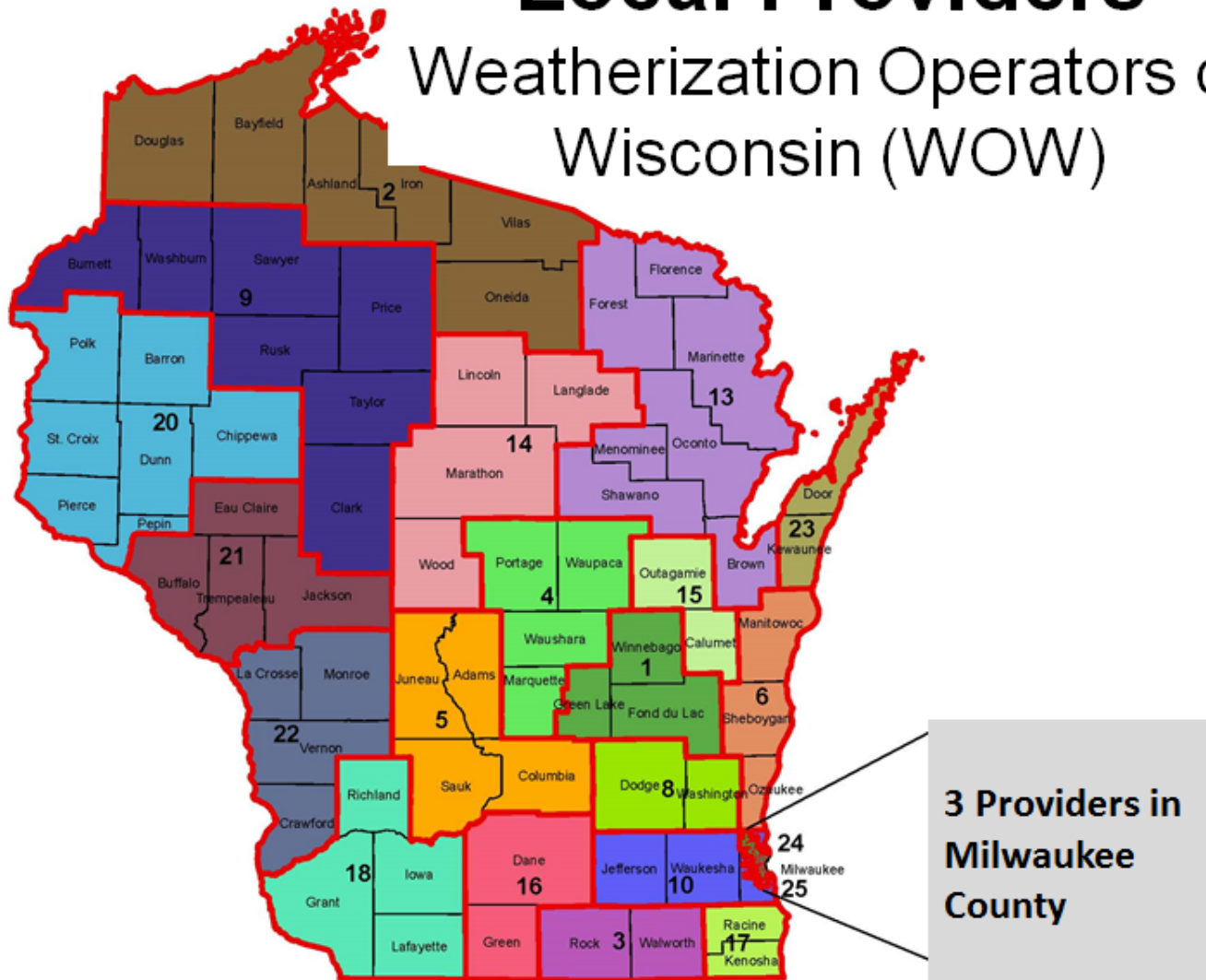


Wisconsin

- 65,503 square miles
- 23rd largest state; pop. 5.8M
- 22 WAP contracts
- 20 Agency Wx Programs covering all 72 counties
- Statewide, ~400 people employed in Wx Programs

Local Providers

Weatherization Operators of Wisconsin (WOW)



WAP Funding

- Estimated annual \$ and units:
 - \$6.5M DOE + \$12M LIHEAP + \$37M PB (Public Benefits - Statewide utilities).
 - Total \$55.5M distributed.
 - ~5,600 building units completed.
 - ~800 DOE units completed.

Attempts are made to keep the annual statewide Agency budget distribution close to ~\$50M total; this helps to keep some level of consistency for Agency staffing needs and production planning.

State Agency

- State of Wisconsin
- Department of Administration
- Division of Energy, Housing and Community Resources (DEHCR)
- Home Energy + Bureau
- Weatherization Program
- Policy & QA Sections

- HE+ Umbrella:
 - Energy Assistance Program
 - Emergency Furnace Program
 - Weatherization Assistance Program

Wx Program Staffing

- HE+ Bureau staff supporting WAP:
 - 9-10 QA staff; almost exclusively QA monitoring and technical assistance;
 - Also complete inspections on ~200 emergency furnace installations.
 - 5-6 Policy staff; policy development and technical resource; coordinate work closely with QA staff.

V.5.1 Technical Guides and Materials - Questions

- Do your technical resources (field guide, etc.) **align** with the SWS?
- Does your network **have** the technical resources?
- Has your network **read** and **understood** the technical resources?
- Will your network uphold your **standards of quality work**?



V.5.1 Technical Guides and Materials

- Define the work.
- Get everyone on the same page.



WI Technical Guides

The Field Guide was finalized to comply with the appropriate SWS for each Wx measure procedure and was approved by our DOE Project Officer.

Wisconsin Request for Bid templates include a requirement that Agencies ensure contractor agreements are tied to program requirements contained in technical guides and materials.

Technical Guides

- Updates:
 - made to the Wx Program Manual and Wx Field Guide annually;
 - documents are distributed electronically to all Agencies;
 - distributed via broadcast e-mail;
 - published on the Home Energy + website on or before July 1 each year, and throughout the year as necessary.

HE+ Documents

WisWAP Grantee Information

Heating System information can be found on the [Home Energy Plus Program Information](#) page.

Department of Energy Plans

[Program Year 2017 DRAFT DOE Annual Plan](#) (01/25/2017)

[Program Year 2017 DRAFT DOE Master Plan](#) (01/25/2017)

FY17 Program Manuals

[FY 2016-2017 Weatherization Program Manual](#) (12/28/2016)

[FY 2016-2017 Weatherization Program Manual Track Changes Update](#) (12/28/2016)

[Weatherization Manual Change Submittal Form](#) (12/7/2015)

Wisconsin Weatherization Field Guide

[Complete FY17 Field Guide](#) (06/27/2016)

[Chapter 1: Diagnosing Air Leakage](#) (06/22/2016)

[Chapter 2: Heating Envelope Building Measures](#) (06/22/2016)

[Chapter 3: Heating System Measures](#) (06/22/2016)

[Chapter 4: Base Load Measures](#) (06/22/2016)

[Chapter 5: Health and Safety](#) (06/22/2016)

[Chapter 6: Repair](#) (06/16/2016)

[Chapter 7: Manufactured Housing Weatherization](#) (06/22/2016)

[FY17 Field Guide Summary of Changes](#) (6/23/2016)

Wisconsin Weatherization Field Guide - Spanish Version - Guía de campo de la climatización Wisconsin

[Chapter 1: Diagnosing Air Leakage - Diagnóstico y sellado de las fugas de aire](#) (11/23/2016)

[Chapter 2: Heating Envelope Building Measures - Mediciones del cerramiento de calefacción del edificio](#) (11/23/2016)

[Chapter 3: Heating System Measures - Mediciones del sistema de calefacción](#) (11/23/2016)

[Chapter 4: Base Load Measures - Medidas de carga de base](#) (11/23/2016)

[Chapter 5: Health and Safety - Salud y seguridad](#) (11/23/2016)

[Chapter 6: Repair - Reparaciones](#) (11/23/2016)

[Chapter 7: Manufactured Housing Weatherization - Climatización de casas manufacturadas](#) (11/23/2016)

[Appendices - APÉNDICES](#) (11/23/2016)

Mobile Home Measures List

[Mobile Home Measures List](#) (06/23/2016)

[Mobile Home Measures List WisWAP Reporting Guide](#) (06/23/2016)

[Mobile Home Measures Building Create/Add Measure/Invoice guide](#) (06/23/2016)

[Reporting Mobile Homes in WisWAP Webinar](#) (06/24/2015)

Fuel Switch Policy

[Fuel Switch Policy](#) (06/28/2016)

[Fuel Switch Process Summary](#) (06/28/2016)

Support for Wx Agencies

- Weatherization Program Manual
- Weatherization Field Guide
- Weatherization Assistance Guide
- Help Desk: email or phone call
- Technical Assistance
- Training

2016 – 2017 Wisconsin Weatherization Assistance Program Manual



homeenergy+



WISCONSIN DEPARTMENT OF
ADMINISTRATION



U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy

Table of Contents

Foreward.....	i
Table of Contents.....	iii
1. Definitions and Acronyms	1-1
2. General Management	2-1
2.1 Program Management	2-1
2.1.1 Conflict of Interest.....	2-1
2.1.2 Local Coordination	2-2
2.1.3 Priority of Service.....	2-3
2.1.4 Home Energy Plus Logo	2-3
2.1.5 Customer Service and Education	2-3
2.1.6 Quality Control System	2-4
2.1.7 Final Inspections.....	2-5
2.1.8 Reworks.....	2-5
2.1.9 Corrections	2-5
2.1.10 Training and Technical Assistance.....	2-5
2.1.11 Basic Energy Auditor Certification.....	2-5
2.2 Documentation and Record Keeping	2-6
2.2.1 IT System Requirements	2-6
2.2.2 Timely WisWAP Data Entry	2-6
2.2.3 Customer Files.....	2-7
2.2.4 Work Agreements	2-8
2.2.5 Historic Review	2-9
2.2.6 Record Retention.....	2-9
2.2.7 Open Records/Public Records	2-10
2.3 Handling Sensitive Data.....	2-10
2.3.1 Non-Disclosure Agreement.....	2-11
2.3.2 Sensitive Data Tiers.....	2-11
2.3.3 Desktops.....	2-11
2.3.4 Portable Computing Devices.....	2-12
2.3.5 Portable Media.....	2-12
2.3.6 General Electronic File Creation and Storage	2-12

family homeowners and tenants within 60 days of reporting a building as complete. The Guidebook contains information about installed materials, appliances and mechanicals including warranty information and installer contact information, and is available on the HE+ [Training and Technical Assistance](#) website.

2.1.6 Quality Control System

An Agency shall develop, maintain and implement a documented Quality Control System (QCS). A QCS includes procedures that are designed to provide a detailed review of the weatherization program process including an on-site unit check and measurement of customer satisfaction. The QCS process is not the same as the final inspection completed on each job. Agencies shall have a mechanism to track jobs receiving a QCS review and shall document management review and approval. Several optional tools for reviews and documentation are available under the Quality Control System Tools heading on the HE+ WisWAP Information page.

Quality control shall be performed continuously throughout the contract year in correlation with production. The following areas shall be covered under a QCS:

- 1) Prior to the job being released into production, the program manager shall review and approve all jobs meeting the following criteria:
 - a. Single family houses and mobile homes where completed energy audits show an estimated job cost of \$12,000 or greater. Cost effective energy conservation measures shall not be removed from a job to bring the estimate under the \$12,000 threshold.
 - b. Single family houses and mobile homes where completed energy audits show total estimated repair costs of \$1,500 or greater.
- 2) After job completion, evaluating a minimum of 5% of all jobs for:
 - a. Energy Audit accuracy and appropriateness.
 - b. Work Order/Work Agreement accuracy and appropriateness.
 - c. Completeness of work performed (final inspections).
 - d. Quality of work performed (for example, in-progress quality control inspections).
 - e. Compliance with applicable health and safety requirements.
 - f. Customer satisfaction with work performed.
 - g. Contractor and/or agency crew performance and management.
- 3) A feedback loop for discussing work performance that is below required standards with those performing the work (contractors and/or agency staff).
- 4) Verifying heating system replacements identified by contractors that were not recommended by the computerized energy audit. This may include: using multiple contractors but not having replacements performed by the same contractor who identified the failure; obtaining a percentage of failed heating system units and verifying failures with destructive tests; or using other methods to ensure that reported heating system failures are accurate.
- 5) Documenting all complaints.



Wisconsin Weatherization Field Guide



*home***energy+**

U.S. DEPARTMENT OF
ENERGY

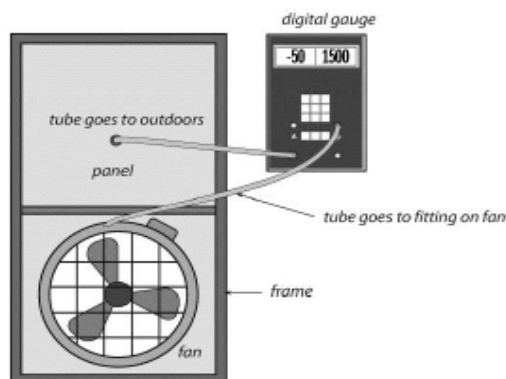
Energy Efficiency &
Renewable Energy

Table of Contents

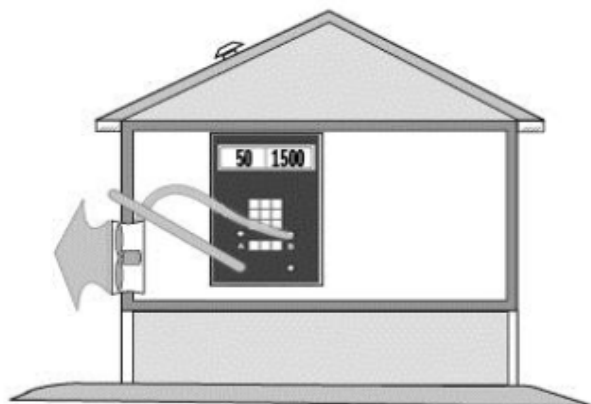
Table of Contents	i
Chapter 1: Diagnosing Air Leakage	1-1
1.1 Air Leakage Diagnostics Policy	1-1
1.2 Diagnostic Overview	1-1
1.2.1 Air Leakage Effects	1-1
1.2.2 Goals of Air-Leakage Testing	1-2
1.3 House Airtightness Testing	1-3
1.3.1 Blower Door Testing	1-4
1.3.2 Preparing for a Blower Door Test	1-5
1.3.3 Blower Door Test Procedures	1-6
1.4 Air Sealing and Indoor Air Quality	1-8
1.4.1 Non-Guideline Air Sealing	1-8
1.4.2 Guided Air Sealing and Wisconsin Cost-Effective Guideline Calculation	1-10
1.5 Zone Pressure Diagnostics	1-11
1.5.1 Simple Air-Leakage Tests	1-13
1.5.2 Using a Digital Gauge to Test Pressure Boundaries	1-14
1.5.3 Locating the Pressure/Thermal Boundary	1-18
1.5.4 Add-a-Hole Zone-Leakage Measurement	1-21
1.5.5 Open-a-Door Zone-Leakage Measurement	1-23
1.5.6 Adjusting Zone Pressure Measurements for Baseline	1-26
Chapter 2: Heating Envelope Building Measures	2-1
2.1 Heating Envelope Insulation	2-1
2.2 Attic and Roof Insulation	2-1
2.2.1 Pre-insulation Attic and Roof Insulation Prep	2-1
2.2.2 Attic Ventilation	2-2
2.2.3 Attic Accesses, Walk-up Stairways, and Doors	2-3
2.2.4 Calculating Attic Loose-Fill Insulation	2-5
2.2.5 Blowing Attic Insulation	2-5
2.2.6 Installing Attic Batt Insulation	2-5
2.2.7 Installing Attic Insulation in 1½ Story Homes (Finished Attics)	2-6

1.3.1 Blower Door Testing

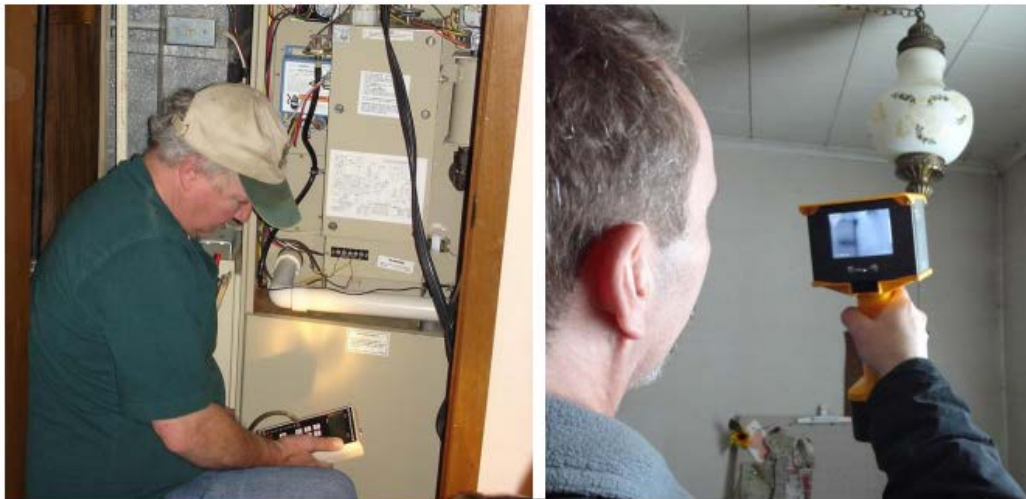
The blower door creates a 50 Pascal pressure difference across the building shell and measures airflow in cubic feet per minute at 50 Pascals (in order to gauge the leakiness of homes). The blower door also creates pressure differences between rooms in the house and intermediate zones like attics, crawl spaces, and garages. These pressure differences can give clues about the location and size of a home's hidden air leaks.



Blower door components: Include the frame, panel, fan, and digital gauge.



Blower door test: Air barriers are tested during a blower-door test, with the house at a pressure of 50 Pascals negative with reference to outdoors. This house has 1500 CFM₅₀ of air leakage. Further diagnostic tests can help determine where that leakage is coming from.

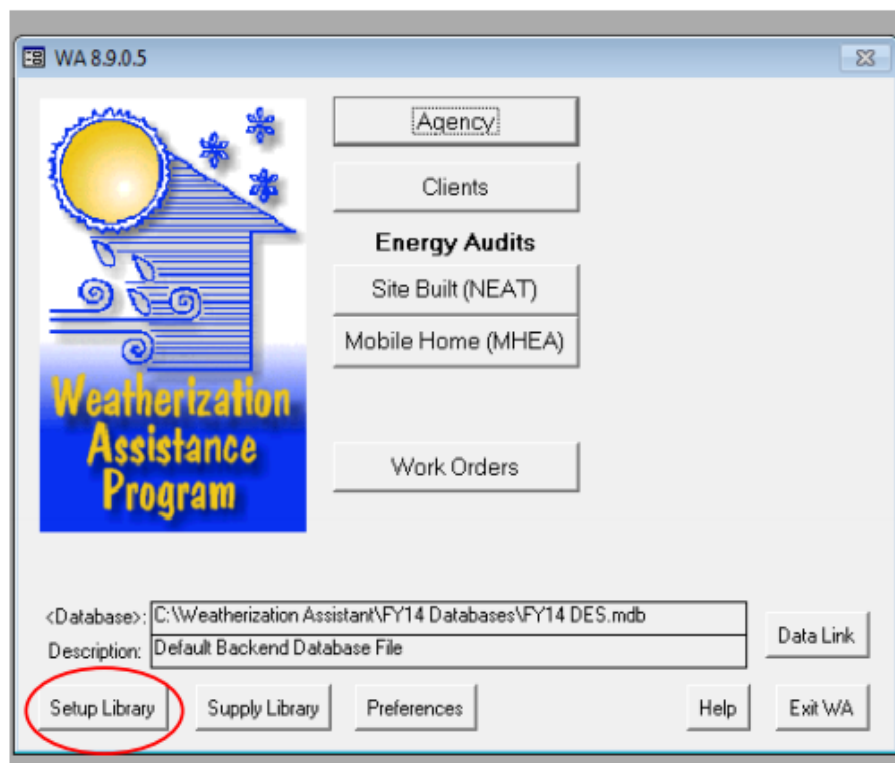


FY17 Wisconsin Weatherization Assistant Guide

The Wisconsin Weatherization Assistance program mission is to reduce energy costs for eligible low-income households by improving the energy efficiency of their homes while ensuring their health and safety.

Table of Contents

Chapter 1	Database Management.....	1
1.0	Introduction to the Weatherization Assistant	1
1.1	Features of Version 8.9.....	1
1.2	Weatherization Assistance Help.....	1
1.3	Hardware Requirements	1
1.4	Installation Procedure	2
1.5	Network Installation.....	4
1.5	How to Import Weatherization Assistant 8.9 Client Records.....	5
Chapter 2	Set-up and Supply Libraries	14
2.0	Overview.....	14
2.1	Setup Library Tabs	15
2.1.1	Setup Library Information.....	15
2.1.2	Key Parameters	16
2.1.3	Fuel Costs	16
2.1.4	Fuel Price Indices	16
2.1.5	Library Measures	17
2.1.6	User Defined Measures	18
2.1.7	User Defined Insulation Types	18
2.2	Supply Library Description	19
2.2.1	General Information Tab	20
2.2.2	Supply Name – Required	20
2.2.3	Agency – Required	21
2.2.4	State	21
2.2.5	Description – Optional.....	21
2.2.6	Comment – Optional.....	21
2.3	Hot Water Equipment and Refrigerator Forms	21
2.3.1	Description – Required	21
2.3.2	Manufacturer – Required	21
2.3.3	Model – Required	22
2.3.4	Supplier – Optional	22
2.3.5	Units – Required	22
2.3.6	Cost/Unit – Required.....	22
2.3.7	Energy Details	22
2.4	Water Heaters.....	22
2.5	Refrigerators	23
2.6	Labor	23
Chapter 3	Client Records	24
3.0	Description.....	24
3.1	Completing Client Data Records	25
3.1.1	Client Navigation Block	25
3.1.2	Client Report Block	26
3.1.3	Other Client Information Fields	26
3.2	Other Client Identification Screens	27
3.2.1	Status Tab	27

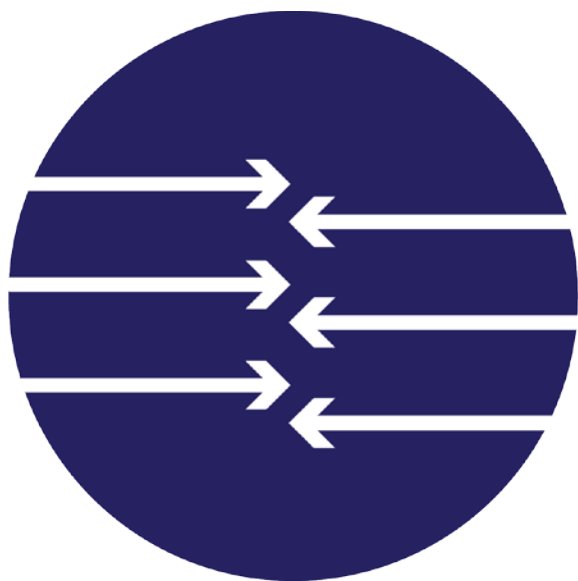


2.0 Overview

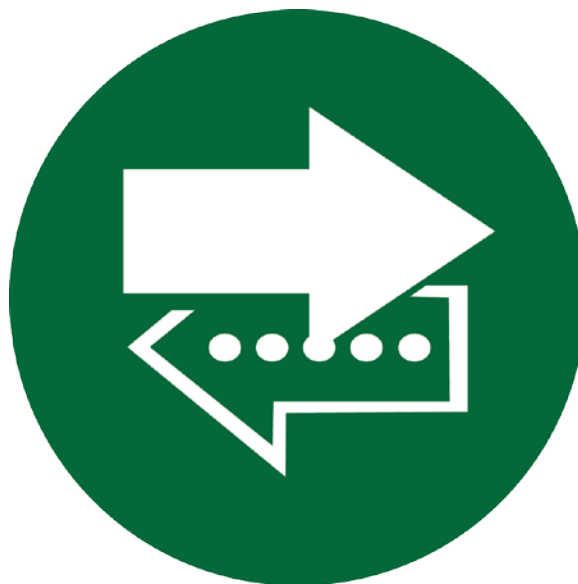
The *Setup Library* is a data structure where measure costs, fuel prices, and other required data is entered to customize the Weatherization Assistant for a particular area (such as the State of Wisconsin or an agency). Any number of different setup library records can be created and associated with the identified area.

In Wisconsin, the set-up library stores information like material costs, fuel costs, and other adjustable parameters that relate to most of Wisconsin's audit jobs. The set-up library customizes the program to Wisconsin. The parameters in Wisconsin's set-up library are determined and set by the division. Agencies receive a unique agency set-up library at the beginning of each contract year with the current fiscal year parameters as well as agency specific costs. Changes in the setup library (cost details for example) WILL affect the generation of audit recommendations.

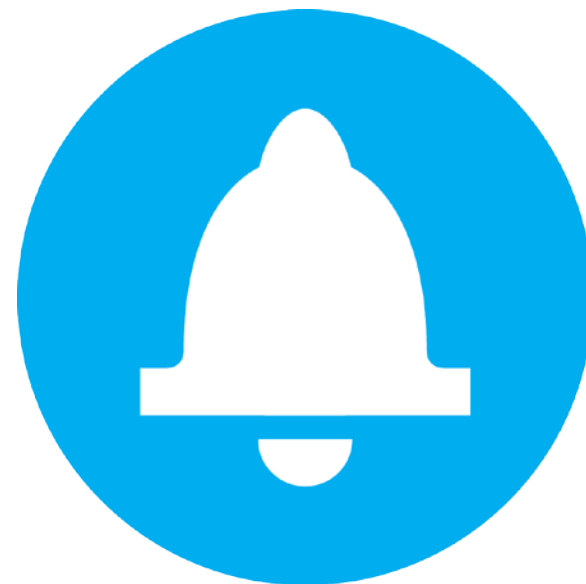
V.5.1 Technical Guides and Materials



ALIGNMENT

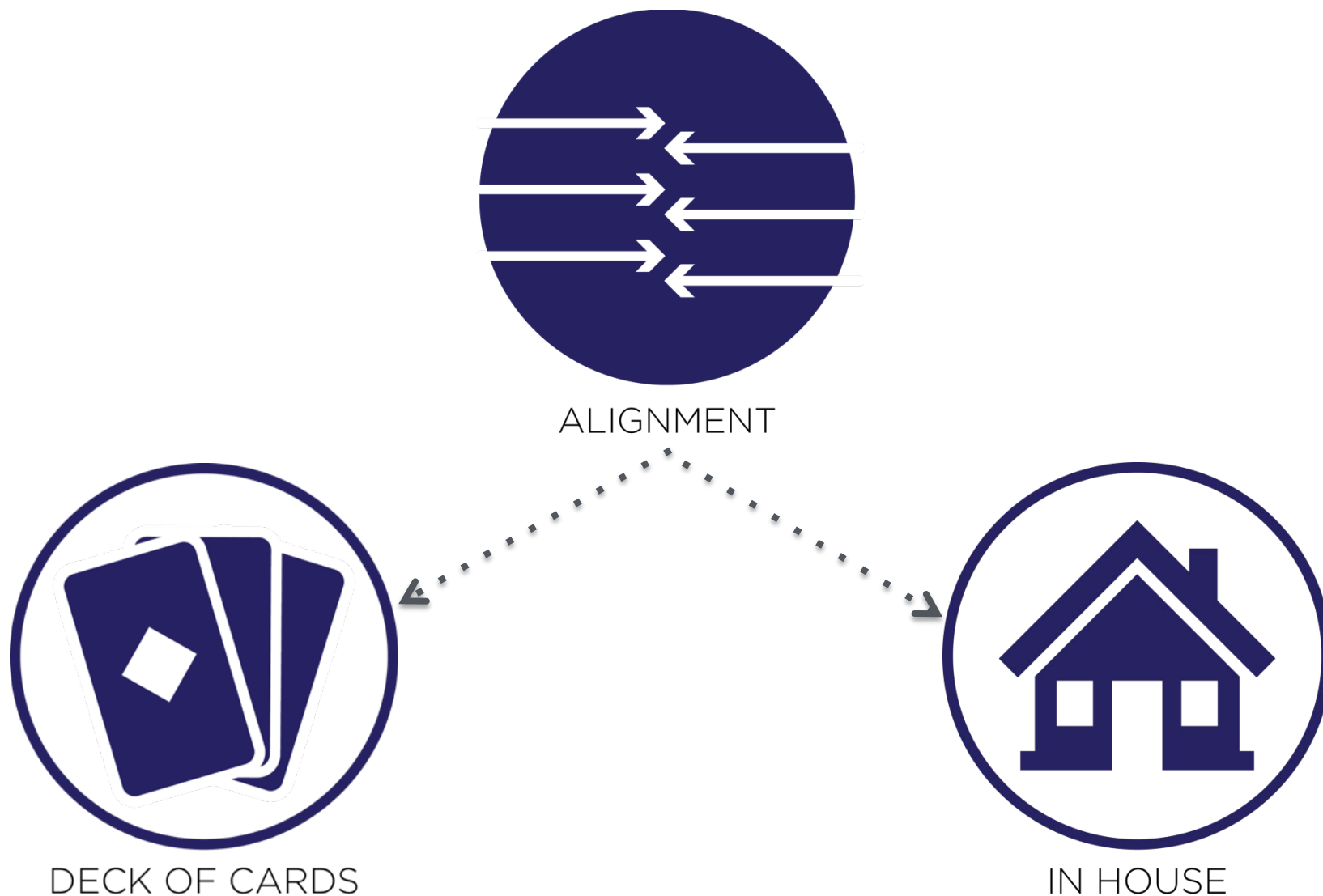


DISTRIBUTION

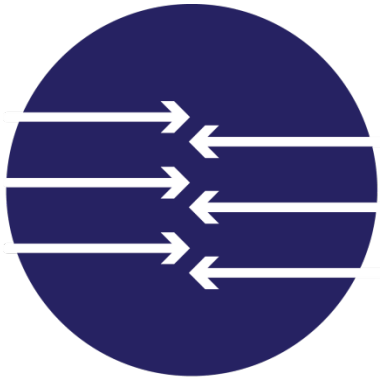


NOTIFICATION

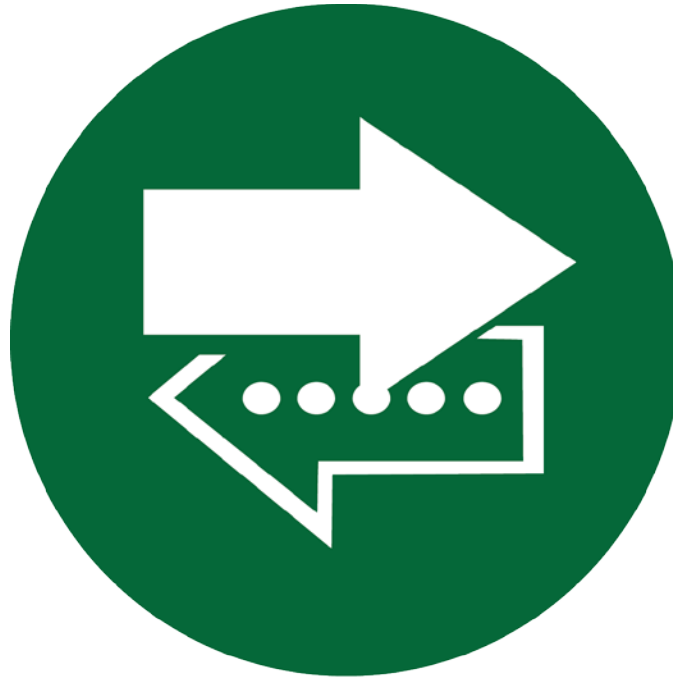
V.5.1 Technical Guides and Materials - Alignment



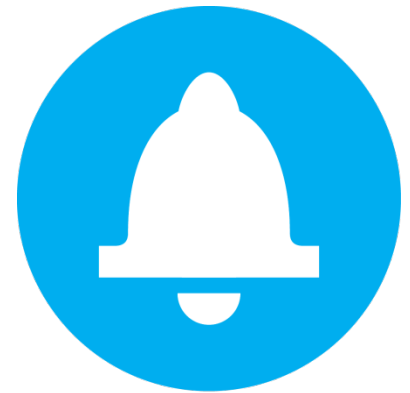
V.5.1 Technical Guides and Materials



ALIGNMENT



DISTRIBUTION



NOTIFICATION

V.5.1 Technical Guides and Materials - Distribution



What about you?

V.5.3 Final Inspection

- Certification requirement.
- Disciplinary policy.
- Final Inspection alignment.

V.5.3 Final Inspection - Questions

- How many certified QCI are in your state?
- Do you have enough to final inspect and monitor all production?
- How many units will you monitor?
- What will you do if a local inspector isn't up to snuff?
- Do your final inspection forms align with the SWS?
- How is the process going so far?

V.5.3 Final Inspection

We've defined the work, now hold everyone to it.



V.5.3 Final Inspection

Avoid “heat of the moment” decisions.



Wisconsin Approach



Final Inspections

- Every weatherized unit receives a final inspection by the Agency.
- Final inspection shall not be performed by the person who also did the initial energy audit.
- Certified QCI performed on 100% of DOE units.

Final Inspections

- QCI Certified Inspectors:
 - ~70 certified inspectors statewide.
 - Most work for the Wx Agencies.
 - Five contracted certified inspectors.
 - Five certified inspectors at DEHCR.
 - DEHCR QA Monitors or contractors perform QCI on 10% of all completed units.

Final Inspections

- DEHCR recommends Agencies perform “real-time” final inspections whenever possible.
- A process improvement initiative to have the final inspector on-site on the last day of scheduled crew work.
- Improves responsiveness and efficiency of program operations by allowing crew workers to immediately address any unsatisfactory work.

Final Inspections

- Contracted Final Inspections:
 - Two contracted firms currently engaged by DEHCR – they cover the whole state.
 - Developed a scoring system (1-5) based on measure installation details.
 - Contractor must file a Report for each job.
 - File review (by State monitoring staff).
 - Required reworks (by State monitoring staff).

Final Inspections

- Disciplinary actions for inadequate inspection practices are reviewed on a case-by-case basis.
- Identified through QA monitoring visits.
- When disciplinary action is warranted, a corrective action plan is developed and implemented based upon the significance of the finding.

V.5.3 Final Inspection

- Certification requirement.
- Disciplinary policy.
- Final Inspection alignment.

V.5.3 Final Inspection

- **Certification requirement.**
- Disciplinary policy.
- Final Inspection alignment.



V.5.3 Final Inspection – Certification Requirement

QCIs will be shared among agencies.



Sharing – Pros and Cons

Pros:

- Separation of duties.
- Lower monitoring (maybe).
- Peer to peer learning.



Cons:

- Complexity.
- Travel time.
- Lack of control.
- Potential for adversarial relationships.

V.5.3 Final Inspection – Certification Requirement

Contract out Final Inspections.



Contract Out – Pros and Cons

Pros:

- Separation of duties.
- Lower monitoring (maybe).
- Consistency.



Cons:

- Complexity.
- Lack of WAP-specific knowledge.
- Lack of OTJ Training/mentorship.

V.5.3 Final Inspection – Certification Requirement

Add Certification as hiring condition for new staff.



Hiring Pre-requisite – Pros and Cons

Pros:

- Cost.
- Simple.



Cons:

- Time.
- Lack of eligible applicants.
- Time.

V.5.3 Final Inspection – Disciplinary Actions

- Certification requirement.
 - **Disciplinary policy.**
 - Final Inspection alignment.
- Grantees will provide a copy of relevant policies and procedures that will govern the quality control inspection process in accordance with WPN 15-4 Section 3 and **outline disciplinary actions for inadequate inspection practices.** This should include a description of how the inspector is related to the work being done on the home (i.e. did they also audit the home or are they an independent third-party?) as well as the percentage of homes that will be included in the Grantee monitoring process.

Clearly define what counts as violations.

Indiana Example

- **Violations:**

- A. Repeated occurrences of failed Combustion Appliance Zone (CAZ) testing resulting in re-work;
- B. Repeated occurrences of failing to properly complete required heating systems forms ;
- C. Repeated monitoring findings related to the contractor or persons performing the work;
- D. Repeated incidents of unsatisfactory, sub-standard work performance;
- E. Repeated incidents of sub-grantee having to repay funds related to poor work performance by contractor;
- F. Repeated incidents of violating IHCD, DOE or LIHEAP program requirements;
- G. Fraudulent activity or fraudulent charges that are being reimbursed by the Weatherization Assistance Program; or**
- H. Negligent work performance that leaves clients or other workers in imminent danger (Health and Safety- i.e., carbon monoxide allowed to enter the home or gas leak not addressed).

Clearly define consequences of violations.

V.5.3 Indiana Example

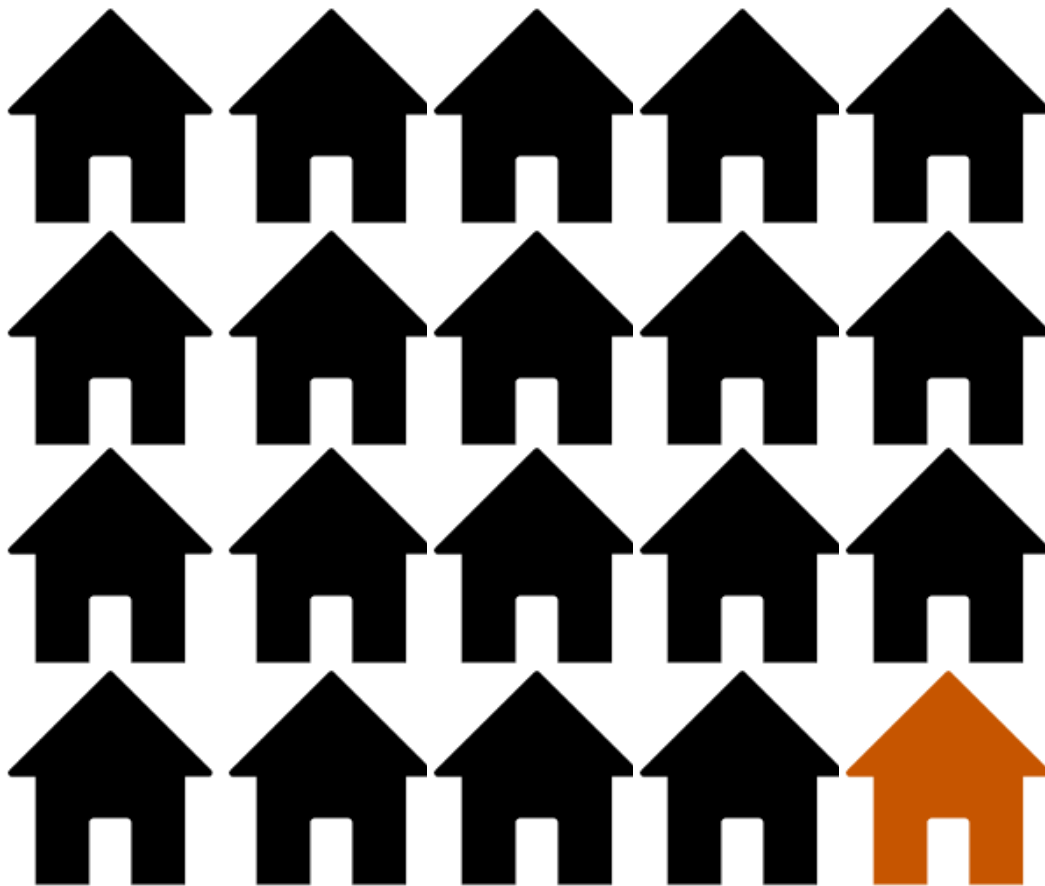
Contractor Suspension and Debarment Policy

- Consequences:

- Remedial Training. A contractor or persons performing work that fall under any of the categories (A- B) will be recommended for remedial training and will be denied participation until remedial training is completed.
- Denial of Participation. A contractor or persons performing work that fall under any of the categories (C-F) can be denied participation for up to 2 years.
- Permanent Debarment. A contractor or persons performing work that fall under category (G and H) will fall under the IHCDCA Suspension & Debarment Policy, which could lead to permanent debarment from providing weatherization services funded through IHCDCA's Weatherization Assistance Program.

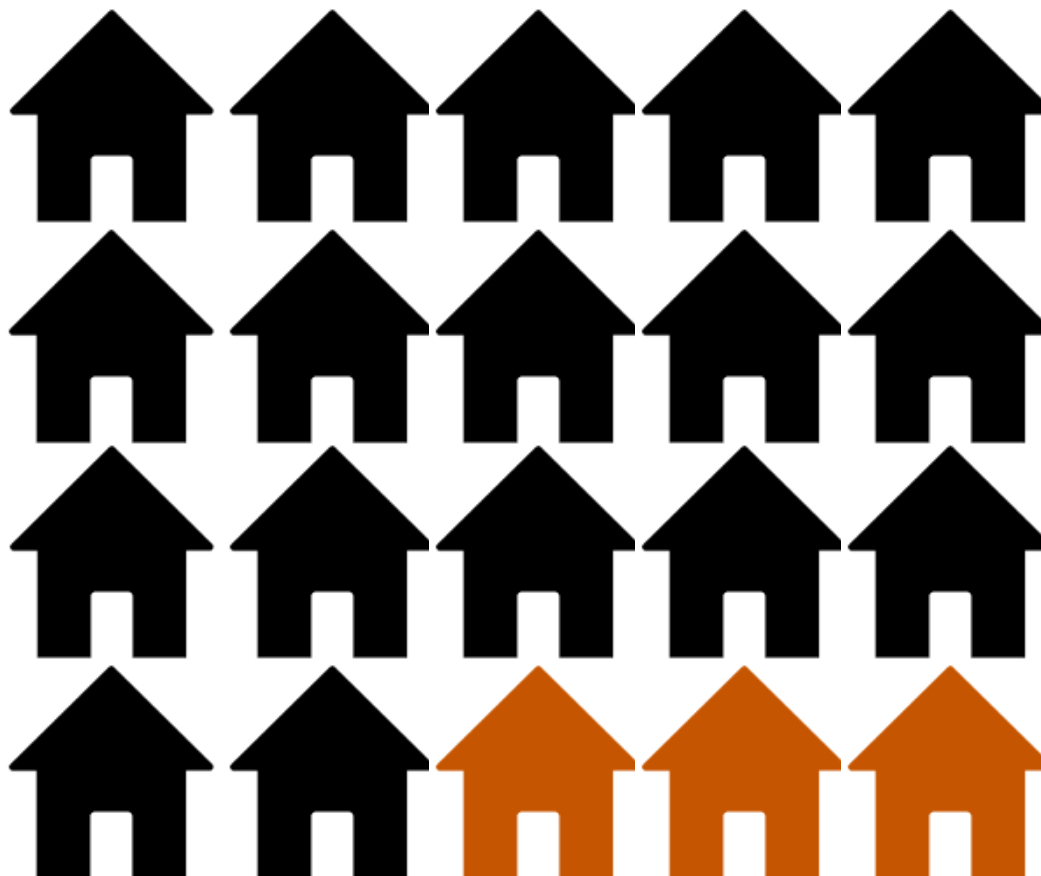
V.5.3 Final Inspection – Disciplinary Actions

Increase % Units monitored



V.5.3 Final Inspection – Disciplinary Actions

Increase % Units monitored



V.5.3 Final Inspection – Disciplinary Actions

Require Additional Training



V.5.3 Final Inspection – Disciplinary Actions

Increase On the Job training/supervision



V.5.3 Final Inspection – Disciplinary Actions

- Increased monitoring.
- Additional training.
- On the job training/mentoring.
- MUST have mechanism for suspension and/or debarment.

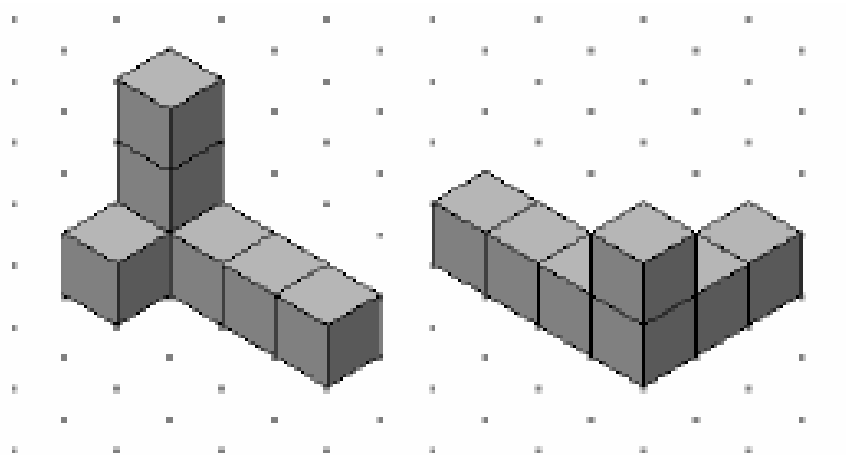


V.5.3 Final Inspection

- Certification requirement.
- Disciplinary policy.
- **Final Inspection alignment.**

V.5.3 Final Inspection – Final Inspection Alignment

- SWS On-line Tool Feature.
- In-house – manually.
- In-house – tie automatically to work order.



Standards and results - Do they match?

V.5.3 Final Inspection – SWS On-line Tool

- Create list of Favorites for the Unit.
- Select “Print”.



V.5.3 Final Inspection – SWS On-line Tool

Check “Create Quality Control Checklist”.

Selected Standard Work Specification Details

☒ **Create Quality Control Checklist**

3.1101.1 Exterior Holes and Penetrations

Topic: Walls

Subtopic: Manufactured Housing Walls

Desired Outcome: Penetrations sealed to minimize air leakage and moisture movement between unconditioned and conditioned space; all repairs will maintain structural integrity

Available In: Manufactured Housing

Manufactured Housing

	TITLE	SPECIFICATION(S)	OBJECTIVE(S)	
<input type="checkbox"/>	3.1101.1a	Installer prework assessment will be conducted to determine: <ul style="list-style-type: none">• Structural integrity• Condition of wall stud• Insulation• Accessibility• Number, type, size, and location of	Ensure work space is safe and ready for air sealing Verify scope of work	4054

Checkbox column appears

V.5.3 Final Inspection – In-house, Manually

Work Order Item	SWS	Specs/Outcomes/Objectives	Confirm
Clean/tune/evaluate the furnace.	5.3003.2	Analysis on critical components and operations completed in accordance with industry and manufacturer specifications	
Install new chimney liner in active chimney.		Conforms to NFPA-211 (Authority Having Jurisdiction).	
Install rigid barriers in the attics around chimneys to keep insulation at least two inches from the masonry.	4.1001.3	Holes, penetrations, and bypasses will be sealed Dams will be fixed in places that maintain required clearance	
		A rigid dam having a height greater than the insulation to be installed will be constructed to ensure a 3" clearance between combustion flue vent and dam	
		Chimney vents will have an airspace clearance to combustibles in accordance with IRC M1801.3.4	
		Insulation will not be allowed between a heat-generating appliance and a dam unless the material is rated for contact with heat generating sources	
Close the cellar perimeter drain.	2.0111.2i	Passive drains or sump pumps will be used to remove standing water	
Install 6-mil poly vapor retarder on ground under kitchen and rear addition.	2.0403.1	An air barrier and ground moisture barrier, covering 100% of the exposed crawl space floor, will be installed and sealed to the wall's air and moisture barrier	
		Ground moisture barrier will be fastened to ground with durable fasteners or ballast(s) and extend a minimum of 6" up the foundation wall	
		When seams exist, they will be overlapped a minimum of 12" with "reverse" or "upslope lapping" technique	
		For wall to floor connection, the wall moisture barrier will be installed under the ground moisture barrier	
		A durable sealant compatible with the air barrier and ground moisture barrier will be used	
		The air barrier and ground moisture barrier will not interfere with the established drainage pattern	
Air seal all penetrations in the wall between the kitchen and unheated shed to isolate the attached garage from the living space.	3.1501.1	All lighting fixtures, wiring, plumbing, venting, ducting, and gas piping penetrations will be sealed	
		All joints and connections in ductwork will be fastened and sealed with UL 181B or 181B-M welds, gaskets, adhesive mastics, or mastic-plus- embedded-fabric systems	
		All cracks in house and garage separation wall will be sealed, including cracks between mud sill, rim joists, subfloors, and bottom of gypsum board, ensuring the air sealing enhances the integrity of the fire resistance construction of that wall	

Work Order Item

SWS

Specs

Check

V.5.3 Final Inspection – In-house, tie to Work Order

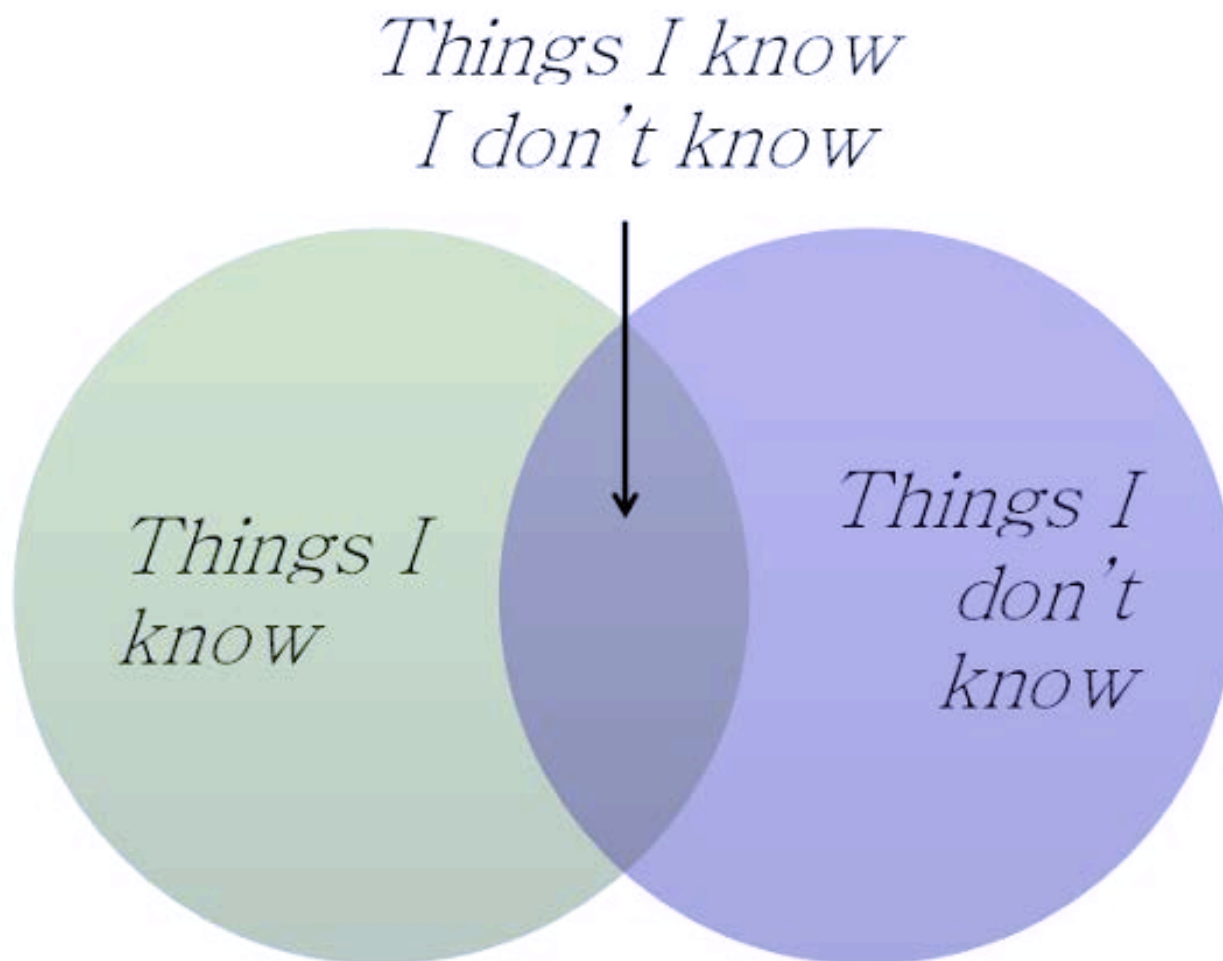


What about you?

V.6 – Weatherization Analysis of Effectiveness

- How do you assess the effectiveness of Subgrantees?
- How are the comparisons used to guide T&TA activities?
- How do you assess training needs?
- What are the management mechanisms being enacted this year to affect improvement?

You don't know what you don't know.



Wisconsin's Weatherization Analysis of Effectiveness

- Wisconsin's WAP utilizes a comprehensive Quality Assurance (QA) process to continuously analyze the effectiveness of the Program.

What exactly is QA?

- Quality Assurance is the ongoing process of establishing clear, measurable, expected outcomes of weatherization technology.



Data Analysis

- DEHCR continually gathers and analyzes data on:
 - housing types,
 - frequency of measures installed,
 - ranges for costs of installed measures,
 - direct effect of the installed measures.

WisWAP Reports

- Various reports are generated from WisWAP to assist DEHCR QA staff with unit selection for QA monitoring.
- This ensures the best opportunities to review measures and jobs that may need improvement at a local level.
- Helps determine what training might improve quality of work by local crews.

Building Information

Building #	:	Grantee Building #	
Grantee	_____	City/State/Zip	
Housing Type	Single family house	Total Units	1
Total Units Wx 'd	1	Date Prev. Wx'd	
Vacant Building	No	PB Eligible	Yes
Shelters	No	Building Status	Closed
Master Meter Electric	No	Landlord	
Auditor Inspection	Worksheet	Date Completed	6/14/2011 2:38:13 PM
DOE Inspection		Is Building Computer Audited	Yes
Is ARRA Building?	Yes	Created By	
Year Built	1987	Last Updated By	
Exempt Historic Review	Yes		

☒ [Edit Building](#)
☒ [Delete Building](#)
☒ [Add Reweatherization Cycle](#)
☐ [Change Grantee Zipcode](#)

Building Unit Information

Job	Unit	Address	Own/Rent	Application	Cert. Date	Status	Completion Date	Mailing Label	Data Entry Worksheet
-----	------	---------	----------	-------------	------------	--------	-----------------	---------------	----------------------

WisWAP [Job Details For Regular Job] - Windows Internet Explorer provided by State of Wisconsin

http://wx.wi.gov/Jobs/JobDetails.asp?jobid=

File Edit View Favorites Tools Help

★ Favorites Blower door test -multi unit Web Slice Gallery

WisWAP [Job Details For Regular Job]

<u>MWHT005 - Hot Water Treatments Flow Restrictors</u>	each	Estimate: 2 Actual: 1	0.158 0.079	\$8.75 \$21.29	\$17.49 \$21.29	\$0.00	none	ARRA	\$21.29	✓
<u>MWHT010 - Hot Water Treatments Pipe Insulation</u>	Job	Estimate: 1 Actual: 1	0.80 0.80	\$57.39 \$131.91	\$57.39 \$131.91	\$0.00	none	ARRA	\$131.91	✓
<u>MWHT020 - Hot Water Treatments Showerhead</u>	each	Estimate: 1 Actual: 1	0.106 0.106	\$14.59 \$42.59	\$14.59 \$42.59	\$0.00	none	ARRA	\$42.59	✓
<u>PCFL005 - Lighting CFL Bulb</u>	each	Estimate: 16 Actual: 18	0.64 0.72	\$4.71 \$8.16	\$75.28 \$146.84	\$0.00	none	ARRA	\$146.84	✓
<u>URR005 - Refrigerator Replacement</u>	each	Estimate: 1 Actual: 1	0.00 0.00	\$566.00 \$566.00	\$566.00 \$566.00	\$0.00	none	PB	\$566.00	✓
<u>VFR005 - Freezer Replacement</u>	each	Estimate: 1 Actual: 1	0.00 0.00	\$363.00 \$349.00	\$363.00 \$349.00	\$0.00	none	PB	\$349.00	✓
<u>XHAL005 - Health and Safety Alarms CO Detector New or Replace</u>	each	Estimate: 1 Actual: 1	0.09 0.09	\$30.00 \$37.35	\$30.00 \$37.35	\$0.00	none	PB	\$37.35	✓
<u>XHAQ005 - Health and Safety Air Quality Worst Case Draft Test</u>	each	Estimate: 1 Actual: 1	0.50 0.50	\$50.00 \$120.00	\$50.00 \$120.00	\$0.00	none	PB	\$120.00	✓
<u>XHAQ025 - Health and Safety Air Quality Dehumidifier New or Replace</u>	each	Estimate: 1 Actual: 1	0.00 0.00	\$220.00 \$184.00	\$220.00 \$184.00	\$0.00	none	PB	\$184.00	✓
<u>XHAQ035 - Health and Safety Air Quality Other Remediation</u>	each	Estimate: 1 Actual: 1	0.00 0.00	\$160.00 \$160.00	\$160.00 \$160.00	\$0.00	none	PB	\$160.00	✓
<u>XHAR005 - Health and Safety Ventilation Exhaust Ventilation</u>	each	Estimate: 1 Actual: 1	0.00 0.00	\$821.53 \$845.14	\$821.53 \$845.14	\$0.00	none	PB	\$845.14	✓
<u>ZRAQ005 - Repair Air Quality Dryer Venting</u>	each	Estimate: 1 Actual: 1	0.40 0.40	\$75.57 \$134.67	\$75.57 \$134.67	\$0.00	none	ARRA	\$134.67	✓

created by:
last update by:

Wisconsin Department of Administration 101 East Wilson Street Madison, WI 53702

[Report An Error](#)

http://wx.wi.gov/Jobs/JobMeasures.asp?jobid=100435&jobmeasureid=1426976

Trusted sites | Protected Mode: Off

100%

Monthly Production vs Contract Plan

Contract AD119500.17 2012 Contract Plan and Status

Selection Criteria: Report Type: By Grantee | Grantee: Racine/Kenosha CAA - (17) | Contract Year: 2012

Grantee Name 17 Racine/Kenosha CAA
Total Budget \$3,454,450.00
Total Units 402

Month	Expenditures					Production				
	Planned Expenditures	Actual Expenditures	% of Planned Expenditures	YTD Total Expenditures	Actual Cumulative Expenditures	YTD % of Planned Units Production	Actual Units Production	% of Planned Units	YTD Total Actual Units	YTD % of Cumulative Planned Units
Jul	\$261,171.00	\$211,836.01	81.1%	\$211,836.01	81.1%	30	52	173.3%	52	173.3%
Aug	\$257,270.00	\$317,525.23	123.4%	\$529,361.24	102.1%	30	42	140.0%	94	156.7%
Sep	\$339,360.00	\$299,258.80	88.2%	\$828,620.04	96.6%	40	0	0%	94	94.0%
Oct	\$256,270.00	\$266,567.20	104.0%	\$1,095,187.24	98.3%	30	78	260.0%	172	132.3%
Nov	\$343,747.00	\$228,153.83	66.4%	\$1,323,341.07	90.8%	40	21	52.5%	193	113.5%
Dec	\$276,085.00					30	0			
Jan	\$259,740.00					30	0			
Feb	\$258,657.00					30	0			
Mar	\$261,363.00					30	0			
Apr	\$283,754.00					35	0			
May	\$314,771.00					35	0			
Jun	\$342,262.00					42	0			

Actual Expenditures \$1,323,341.07
% of Annual Budget 38.3%
YTD Total Units 193
% of Annual Units Goal 48.0%

Self Evaluation Savings Study

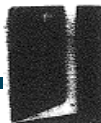
- DEHCR contracts with a third party to conduct this study.
- The SES study is conducted annually and provides critical data on the projected energy and monetary savings of weatherization work performed in Wisconsin.

Self Evaluation Savings Study

- Through this study, DEHCR can analyze trends in savings over multiple years and compare savings and costs performance among the Agencies.
- The SES study assists in:
 - directing policy decisions,
 - identifying best practices being used,
 - targeting training and technical assistance resources.

Other Analysis

- Collect Weatherization Assistant Libraries from each Agency to ensure accurate numbers are being used consistently across the State.
- Reviews of Weatherization Assistant energy audits to ensure accuracy and consistency in estimating costs.
- Customer Surveys.



INDIANHEAD
COMMUNITY ACTION AGENCY, INC.

OPENING DOORS. CREATING OPPORTUNITIES.

ELDON SKOGEN
Board Chairman

PAMELA GUTHMAN
Chief Executive Officer

13979-P

**INDIANHEAD COMMUNITY ACTION AGENCY
WEATHERIZATION PROGRAM QUESTIONNAIRE**

PLEASE COMPLETE THIS FORM AND RETURN IT TO US IN THE ENCLOSED ENVELOPE. WE APPRECIATE YOUR COMMENTS AND SUGGESTIONS.

PART I: PROGRAM EVALUATION

- 1) Were you satisfied with the performance of all staff members?

Auditor	YES <u>✓</u>	NO _____
Crew Members	YES <u>✓</u>	NO _____
Field Supervisor	YES <u>✓</u>	NO _____

- 2) Was the work explained clearly? Very

- 3) Were the crew members courteous and polite? Awesome

Did they clean up the work area each day? Yes

- 4) Were any problems that occurred during the work resolved quickly and fairly? No problems

- 5) Did someone other than weatherization crew members inspect the work when completed? Yes

- 6) Was the job completed to your satisfaction? Yes

- 7) Is this program beneficial to you? Would you recommend this program to others? Yes

PART II: HEATING STAFF EVALUATION

- 1) Did the crew who performed heating system work keep premises reasonably neat and clean? Yes

- 2) Did these individuals respond courteously to questions you had about the work? Yes

- 3) Did the work progress without undue delay? Yes

2017 MAR 13 4:10:35

- 4) Would you recommend that a friend hire the crew who completed your project? Absolutely!
- 5) May we use any additional comments you may include for promotional purpose? Yes

If yes, sign your name in the following space granting ICAA permission to quote you:

Additional Comments:

I couldn't have asked for a better work crew! They must like their jobs - always happy, polite, and nice! Very caring about how I felt about the way they were doing things - Thanks to all!

DEHCR Collaboration

- WISCAP (WI Community Action Programs).
- WOW (Weatherization Operators of WI).
- Hudson Group (energy auditors and production managers from Agencies).
- TDWG (Technical Development Work Group).
- Agency Meetings.

What about you?

V.8.3 Monitoring Activities - Questions

- Will State monitors be *QCI certified* or will you contract it out?
- How many units will you *monitor* at each agency?
- What will you do if you find *poor workmanship*? Faulty audits? Incomplete work in a unit already reported as complete?
- What will you do if an agency isn't up to snuff?

V.8.3 Monitoring – In a nut shell...

How will you make sure your Subgrantees are doing what you asked them to do, and what will you do if they aren't?



V.8.3 Monitoring

Avoid “heat of the moment” decisions...still.



V.8.3 Monitoring Activities

Here's how they do it in Wisconsin.



Quality Assurance Staff

- DEHCR Quality Assurance Section Staff includes:
 - Three Administrative Review Monitors.
 - Five Quality Assurance Monitors - all QCI certified.
 - Contracted QCI inspection firms (2).
 - Additional desk monitoring and support staff.

Monitoring Activities

- Comprehensive monitoring of each Agency is conducted to fulfill the requirements of WPN 16-4.
- QA monitoring is comprised of three main activities for each Agency:
 - Administrative Reviews.
 - Building Unit inspections.
 - Client file reviews.

Administrative Review

- The AR covers general operations of the Agency with a comprehensive examination of programmatic, financial, and management practices and outcomes.
- The AR, combined with the fiscal audit, gives DEHCR an overview of the Agency's administrative capacity and capability.

Administrative Review

- Questionnaire sent out in August,
- Questionnaire returned two weeks before scheduled AR visit,
- Onsite at Agency three to four days,
- Exit conference – onsite,
- Follow-up conference call after additional in-house review,
- Closeout letter.

DEHCR FY17 ADMINISTRATIVE REVIEW QUESTIONNAIRE

WISCONSIN WEATHERIZATION ASSISTANCE PROGRAM

Table of Contents

AGENCY INSTRUCTIONS	2
A. PRELIMINARY MATTERS	2
1. WisWAP Reports	2
B. PROGRAMMATIC AND ADMINISTRATIVE	2
1. Agency Work Flow & Production	2
2. Deferrals	3
3. Production & Customer Service	4
4. Monthly Production vs. Contract Plan	4
5. Health & Safety	4
6. Training and Technical Assistance (T&TA)	5
7. Historic Preservation	5
8. Quality Control System (QCS)	5
9. Complaints	6
10. Procurement	6
11. Conflict of Interest (COI)	7
C. FINANCIAL MANAGEMENT	7
1. Call-Back Corrections	7
2. Job Cost Reduction (JCR)	7
3. Single Agency Audit	8
4. Direct Labor Rate (DLR)	8
5. Adverse Conditions	9
6. Office & Warehouse Space	9
7. Inventory	10
8. Property	11
9. Records Retention	11
10. Document Filing	11
11. Cost Allocation	11
12. Timely Payment of Vendors	11
D. SUBMITTAL CHECKLISTS	12
1. Programmatic & Administrative Documents	12
2. Financial Management Documents	13
E. INSURANCE SUMMARY TABLES	14
1. Agency Insurance Information	14
2. Agency Contractor Insurance Information	15

Administrative Review

- Each Agency is visited for review once per year. Reviews include:
 - Questionnaire responses,
 - WisWAP reports,
 - Ten completed project files,
 - Energy Audits & Diagnostic workbooks,
 - Procurements,
 - Contractor management, quality, and/or production issues.

Administrative Review

- Recent or planned staff changes within Agency Wx Program, Fiscal or Management,
- Work flow (applications, audits, units in progress, final inspections, completed units),
- Comparison to Agency contract unit goal,
- AR Quality Assurance Plan (ongoing items for follow-up by QA Monitor).

Administrative Review

- Agencies are required to have proper documentation in job files:
 - required photos (appliances replaced, doors & windows replaced, Lead Safe Work/Asbestos Work),
 - forms and checklists are filled out accurately and completely,
 - Blower door / combustion safety / ZPD testing results,
 - Heating system checklists.

FY17 AR Quality Assurance Plan

Wx Subgrantee: ASHLAND CHA (#02)

Lead AR Assignment: Paul Donnelly

Date of AR Site Visit: 09/26-28/16

QA Monitor Assignment: Norman Bair

Date of QA Site Visit: 2/2/2017, 3/16/17

Client File Review

Priority	Item Description	Agency Progress	Verified
1	<u>Air Sealing</u> - Air sealing costs were significantly underestimated on one job. BD still at 5,000 at Final. BD equipment can and should be calibrated - Scribner has been sent to air sealing training. Final Inspector could provide some more detailed guidance on where follow-up air sealing is needed. Agency needs to meet with contractors and review AR comments/feedback. Agency needs to document expectations and verify with site visits (Contractor Management). <i>Verify this has been done and is an ongoing item for Agency follow-up; ensure Agency will provide additional technical assistance to contractor.</i>	Ongoing Monitoring	NB
2	<u>Furnace Sizing</u> - There was one instance of over-sizing a heating system due to inaccurate furnace sizing calculations. Agency needs to review and verify the furnace sizing calculations are accurate going forward. <i>Verify this is being done and is an ongoing item for Agency follow-up.</i>	Ongoing Monitoring	NB
3	<u>Lead Safe Weatherization</u> - LSW pictures of a gable roof access showed the poly was not taped to the building wall, did not show any barrier, but there was a sign posted. Also, did not see any pictures related to a new bath fan installation. Agency planned to discuss better LSW/PACM containment and documentation procedures with their contractors. Agency needs to meet with contractors and review AR comments/feedback. Agency needs to document expectations and verify with site visits (Contractor Management) and review submitted photo documentation prior to paying Contractors. If the absence of required containment/safe work practice photos of LSW continue, the Division may disallow costs pertaining to these jobs. <i>Verify this has been done and is an ongoing item for Agency follow-up. Verify within 30 days.</i>	Ongoing Monitoring	NB
4	<u>Diagnostic Workbook</u> - There were two instances where the Diagnostic Workbook showed the Blower Door testing was done in depressurization mode in a home with vermiculite in the attic. Agency has to be consistent and careful with recording this documentation. AR recommends a high-	Ongoing Monitoring	NB

QA Monitoring

- Quality Assurance Monitors visit their assigned Agencies regularly:
 - Perform job file reviews,
 - In the field with crews, energy auditors and final inspectors,
 - Provide technical assistance to agency management based on file reviews, field observations and the QAP developed by Administrative Review team.

Building Unit Inspections

- Unit inspections review the quality and appropriateness of the work:
 - an assessment of the original audit,
 - the accuracy and completeness of the work order and post-work inspections,
 - include both in-progress and completed units,
 - particular emphasis placed on heating system replacement and repair.

Building Unit Inspections

- assess compliance with safe work practices,
- adherence to lead safe weatherization and asbestos work protocols,
- comprehensiveness of final inspections, and other applicable criteria.
- Training and technical assistance is provided during in-progress visits as needed.

Building Unit Inspections

- Wx Program standards provide clear guidance to Agencies regarding contractor performance management, to conform with DOE requirements and State law.
- Included is specific information on actions or conditions that may trigger termination of a contract.

Building Unit Inspections

- DEHCR requires that Agencies report every case where a contract is terminated for cause.
- As required by WPN 16-4, DEHCR may, upon review of the circumstances, debar a contractor from performing work for any Agency, for a specific period of time.

Reporting Tools

WisWAP

- Customer information
- Action dates:
 - Application
 - Energy Audit
 - Final Inspection
 - Invoice date
- Measure costs
- Average costs
- Unit counts

QA Reporting Database

- Selection of homes to inspect
- Inspection results by measure
- Tracking of inspected units
- Inspector statistics
- Scoring system statistics

Example WisWAP Report

[Export Report](#) [Print](#) [Close](#)

1-4 Unit Measure Frequency and Average Cost Report

Contract Year 2012

Selection Criteria: Contract Year: 2012 | Housing Type: Single family house | Measure Category: Wall Insulation

Statewide Average Cost \$1,535.42
Statewide % of Units Receiving Measure 28.8%
Statewide no. of completed Units 1,186

Single family house

Wall Insulation

	<u>AVERAGE JOB MEASURE COST</u>	<u>NO. OF UNITS RECEIVING MEASURE</u>	<u>% OF UNITS RECEIVING MEASURE</u>	<u>NO. OF COMPLETED UNITS</u>
01 ADVOCAP, Inc.	\$2,114.15	30	37.0%	81
02 Ashland Co. Housing Authority	\$851.45	19	27.5%	69
03 Rock/Walworth Comm. Action	\$1,103.97	22	29.3%	75
04 CAP Services, Inc.	\$1,537.30	18	32.1%	56
05 Central WI Community Action Council	\$1,020.65	23	34.3%	67
06 Partners For Community Dev.	\$1,304.03	6	40.0%	15
08 Hartford Comm Development Authority	\$1,843.67	8	28.6%	28
09 Indianhead Community Action Agency	\$736.75	16	20.8%	77
10 La Casa de Esperanza	\$1,110.74	10	11.5%	87
14 North Central CAP, Inc.	\$2,339.07	2	6.9%	29
15 Weatherization Services - OCHA	\$2,348.49	13	43.3%	30
16 Project Home, Inc.	\$2,161.39	34	32.1%	106
17 Racine/Kenosha CAA	\$2,148.65	12	54.6%	22
18 Southwestern Wisconsin CAP	\$1,384.57	21	31.3%	67
20 West Central Wisconsin CAP	\$916.46	19	32.8%	58
22 Couleecap, Inc	\$976.64	26	32.5%	80
23 Women's Employment Project	\$2,104.22	7	33.3%	21
24 La Casa de Esperanza - MILW	\$1,990.50	30	21.1%	142
25 Social Development Commission	\$1,695.54	25	32.9%	76

QA Monitoring

- Upon completion of an Agency visit, the QA Monitor holds an exit conference with Agency staff. Exit conference topics include:
 - Programmatic strengths,
 - Programmatic weaknesses,
 - Training needs and recommendations,
 - Deficiencies requiring immediate corrective action.

V.8.3 Monitoring Activities

Monitoring Team Configurations:

- 1 State Staff.
- 2 or more State Staff.
- Mix of 3rd Party Contractors and State Staff.

V.8.3 Monitoring Activities

Monitoring Team Configurations:

- **1 State Staff** = QCI + Programmatic Expertise + Financial Expertise.



Super Monitor Approach – Pros and Cons

Pros:

- Feedback loop.
- Consistent.
- Cost.
- Simplicity.
- All in-house.



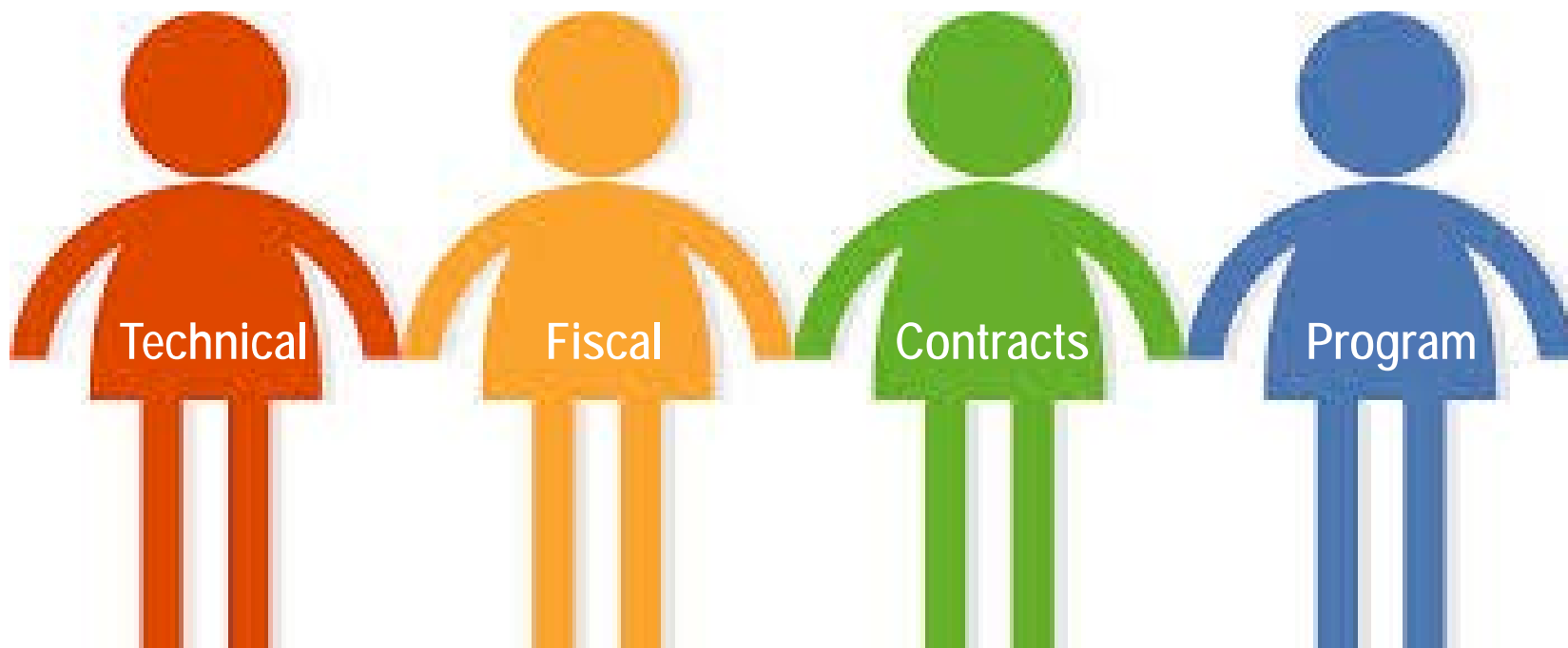
Cons:

- What if they quit?!?

V.8.3 Monitoring Activities

Monitoring Team Configurations:

- **2 or more State Staff** = 1 QCI + 1 Programmatic and Financial Expertise



State Team Approach – Pros and Cons

Pros:

- All in-house.
- Share workload.
- Staff turnover not end of world.



Cons:

- Complex feedback.
- Consistency may suffer.

V.8.3 Monitoring Activities

Monitoring Team Configurations:

- Mix of 3rd Party QCI + State Programmatic and Financial Expertise



Mix of State and 3rd Party – Pros and Cons

Pros:

- Don't need QCI cert. at State.
- May keep State staffing levels down.



Cons:

- Still need programmatic knowledge on site.
- Lack of control
- Lack of feedback loop.

What about you?

V.8.4 Training and Technical Assistance - Questions

- What kind of **training** does your network need this year?
- Do you need **multifamily training** to inspect MF completions?
- Will you pay to **train contractors**? If so, how will you make sure they stay in the program?
- How do you **track** maintenance of required credentials?
- How do you **tailor trainings** to reflect monitoring reports?
- How do you handle **client education**?
- Will you provide **Tier 1** training this year, or just Tier 2?
- What is **Tier 1 and Tier 2** training?

Tier 1 Training Definition

- Comprehensive.
- Occupation-specific.
- Aligned with Job Task Analysis (JTA) for occupation.
- Administered by (or in cooperation with) accredited training center.



Tier 2 Training Definition

- Single-issue.
- Addressing deficiencies in the field.
- No federal requirements for training staff.
- Conference trainings are considered Tier 2.



If T&TA stood for Teeth and Tooth Aches

- Tier 1 is your regular bi-annual cleaning.
- Tier 2 is the emergency visit when you break a tooth.



Tier 1



Tier 2

Training & Technical Assistance in Wisconsin

- Training:
 - activities defined as a specific deliverable training session or a system of training sessions.
- Technical Assistance:
 - activities defined as program development projects or program maintenance.

Training & Technical Assistance

Training and Technical Assistance (T&TA) deliverables are driven by the overall objectives that the provider network must deliver quality Wx installations, at the lowest possible cost, to the greatest possible number of dwellings. Every T&TA activity is considered in light of these objectives.

Training & Technical Assistance

- In 2013, DEHCR entered into a three-year contract agreement for T&TA services with Wisconsin Energy Conservation Corporation (WECC), Madison, WI.
- DEHCR is currently developing the bid package for the next contract cycle.

Training & Technical Assistance

- Training and Technical Assistance (T&TA) planning process:
 - Annual work plans are developed by DEHCR and WECC based on an annual Agency training needs assessment;
 - real-time surveys are conducted;
 - DOE requirements, including DOE Project Officer feedback;
 - training schedule created by WECC.

Training & Technical Assistance

- Agencies are also required to develop their own annual work plan, which typically focus on:
 - training not available through the statewide training contract,
 - local training delivery systems,
 - the costs of sending staff to trainings,
 - customer education.

Training

- Tier 1 Training:
 - Standard Training Plan provides a central training framework and addresses both short and long term training needs.
 - Standard trainings encompass occupation-specific training programs associated with the WAP Job Task Analyses (WPN 15-4).

Training

- Standard Training Plan:
 - Administered and delivered by WECC.
 - Provides specific trainings that are available throughout each year.
 - Provides courses at the basic, intermediate, and advanced levels.
 - Designed for installers, energy auditors, final inspectors, data management and support staff, fiscal and program management staff.

Training

- Tier 2 Training:
 - Production Based Training (PBT) and the Technical Exchange Fair & Conference.
 - PBT immediately targets Agencies with deficiencies noted through QA reviews and other performance factors.
 - The Fair & Conference provides a venue for Wisconsin's Wx professionals to showcase best practices and cost-effective solutions.







Training

- Production Based Training:
 - Provides training and support for specific crews or contractors whose work was cited by the QA team.
 - Hands-on technical training, delivered without a classroom, during the on-site weatherization process.
 - Trainer works directly with the installers to improve their skills while completing a job.

Training

- Additional Training:
 - Technical Assistance is offered for Agencies whenever our evaluations identify lower performance levels.
 - Additional studies are performed on high performing Agencies to determine what helps them succeed so that information can be shared with others in the State Wx Program.

Examples of Trainings and Certifications

- Asbestos O&M Training
- Asbestos Inspector
- Understanding Boiler Systems
- Weatherization Assistant
- Working with the Electronic Diagnostic Workbook
- Planning for End State Conditions
- Basic Energy Auditor
- Intermediate Energy Auditor
- Final Inspector Training
- Forced Air Heating System Testing & Diagnosis
- Mobile Home Energy Auditor Training
- Lead Renovator
- Mobile Home Weatherization
- Installing Ventilation Systems
- Subcontractor Management
- Procurement Success
- Federal Fiscal Requirements
- OSHA 10-Hour Training
- WisWAP Data Entry
- WisWAP Reporting for Management
- Quality Control Inspector Written Exam Preparation (QCI Candidates)
- Targeted Dense-Pack and Advanced Insulation Techniques
- Air Sealing Through Zone Pressure Diagnostics
- Basic Diagnostics (Blower Door, etc.)
- Mold Awareness
- Distribution System Testing & Sealing
- Infrared Scanning

Training

- Agency attendance is typically required at trainings or meetings where Division policy changes are reviewed.
- Attendance for all training is tracked in a database maintained by WECC. The database is also used to track renewals for various training certifications.

HE+ T&TA Website

homeenergy+

Home ▾ Events Calendar Wx Guidebook FAQs ▾ MSDS Search ▾ **Training ▾** Technical Assistance ▾ Exams ▾ Conferences ▾

Welcome to the Home Energy Plus Training home page. The training webpage

- Agency Staffing Update Tool
- Media Library
- Session Evaluations
- Training and Technical Aids
- Training Presentations
- Training Retention Activities
- Webinars
- Wx Online Training
- Wx Training Modules
- WHEAP
- Home Energy Plus Training Reports

Agency Staffing Update Tool

Training Modules

Media Library

Session Evaluations

Training and Technical Aids ▸

Training Presentations ▸

Training Retention Activities ▸

Webinars ▸

WHEAP ▸

Wx Online Training ▸

Wx Training Modules ▸

Home Energy Plus Training Reports

Problems using this site? Contact us at he+training@weccusa.org

<http://homeenergyplus.weccusa.org/traininghome>

Energy Auditor Certification

- Five-day Basic Energy Auditor training course with a certification test.
- Certification requires successfully completing Basic Energy Auditor training and Beginning Weatherization Assistant for Auditors course.
- Training in both the National Energy Audit Tool (NEAT) and the Mobile Home Energy Audit (MHEA).

Technical Assistance

- Enhance and maintain the quality of the services available to Wisconsin's WAP customers.
- Examples include:
 - research on specific weatherization measures.
 - on-site consultation for an Agency on financial management issues.

Technical Assistance

- Further examples:
 - Weatherization Customer Guidebook
 - Document Design Services
 - Weatherization Measures Support
 - Self-Evaluation Savings System (SES)
 - Energy Audit Maintenance
 - Home Energy + Information Help Desk
 - Home Energy Professional QCI Planning

Technical Assistance

- The needs of each Agency are assessed based on past and future QA Monitoring and Administrative Reviews findings.
- Targeted reviews of agency files for compliance with program standards.
- Agencies are invited to ask for TA for any self-identified needs.
- QA Team works with the Policy Team to improve Wx measures implementation.

Technical Assistance

- Measurements of Success:
 - Improved Agency performance on QA Monitoring and Final Inspections.
 - Improved performance on Administrative Reviews.
 - Reduced help desk calls.
 - Reduced customer complaints.
 - Positive customer surveys.

V.8.4 Training and Technical Assistance

Give them the tools to do the work.



V.8.4 Training and Technical Assistance

Identify and address training needs.



V.8.4 Training and Technical Assistance

Specific areas updated in past couple years:

- Multifamily.
- Tier 1 (comprehensive).
- Tier 2 (single issue, conferences).

V.8.4 Training and Technical Assistance - Multifamily

- No certification available for MF QCI.
- Job Task Analysis (JTA) is available.

Requirement:

- **Successful training based on MF QCI JTA.**

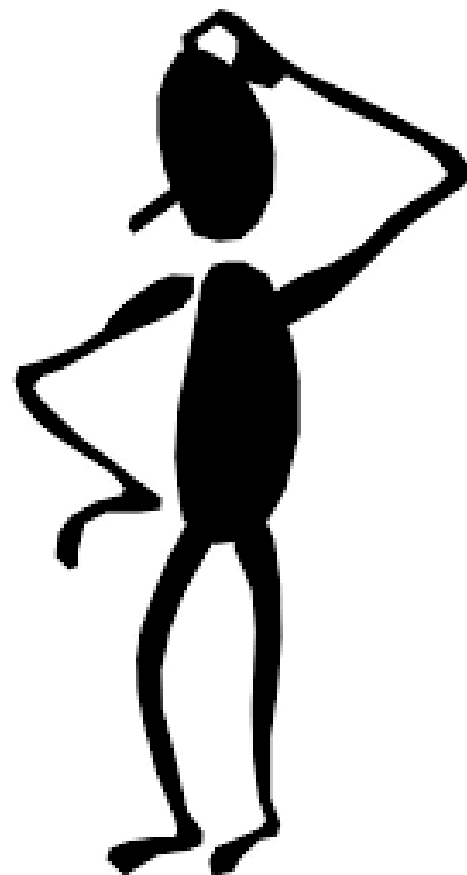


V.8.4 Training and Technical Assistance – Tier 1

*“...must be delivered by,
or in cooperation with,
an accredited training provider...”*

V.8.4 Training and Technical Assistance – Tier 1

- How do you meet this requirement?
- What does, “*in cooperation with*” mean?



Tier 1 Options – Send workers; Comprehensive

- Send workers to training center for complete, accredited training.



Send Workers; Comprehensive – Pros and Cons

Pros:

- Simple.
- Fast.
- Controlled.
- Consistent.



Cons:

- Cost
- Time out of field
- “Vacation” syndrome

Tier 1 Options

Bring training center to you (they all travel) for concentrated Tier 1 training.



Bring Trainers; Comprehensive – Pros and Cons

Pros:

- Fast.
- Field training.
- Accurate Housing stock.
- Your equipment.



Cons:

- Logistics.
- Finding suitable houses.
- Prep work.

Tier 1 Options

Combine distance and/or on-line learning with in-person instruction.



Combine Distance & In-person – Pros and Cons

Pros:

- Identify remedial needs.
- Cost.
- Bang for buck.
- Computer skills.
- Improve in-person training.
- Time.

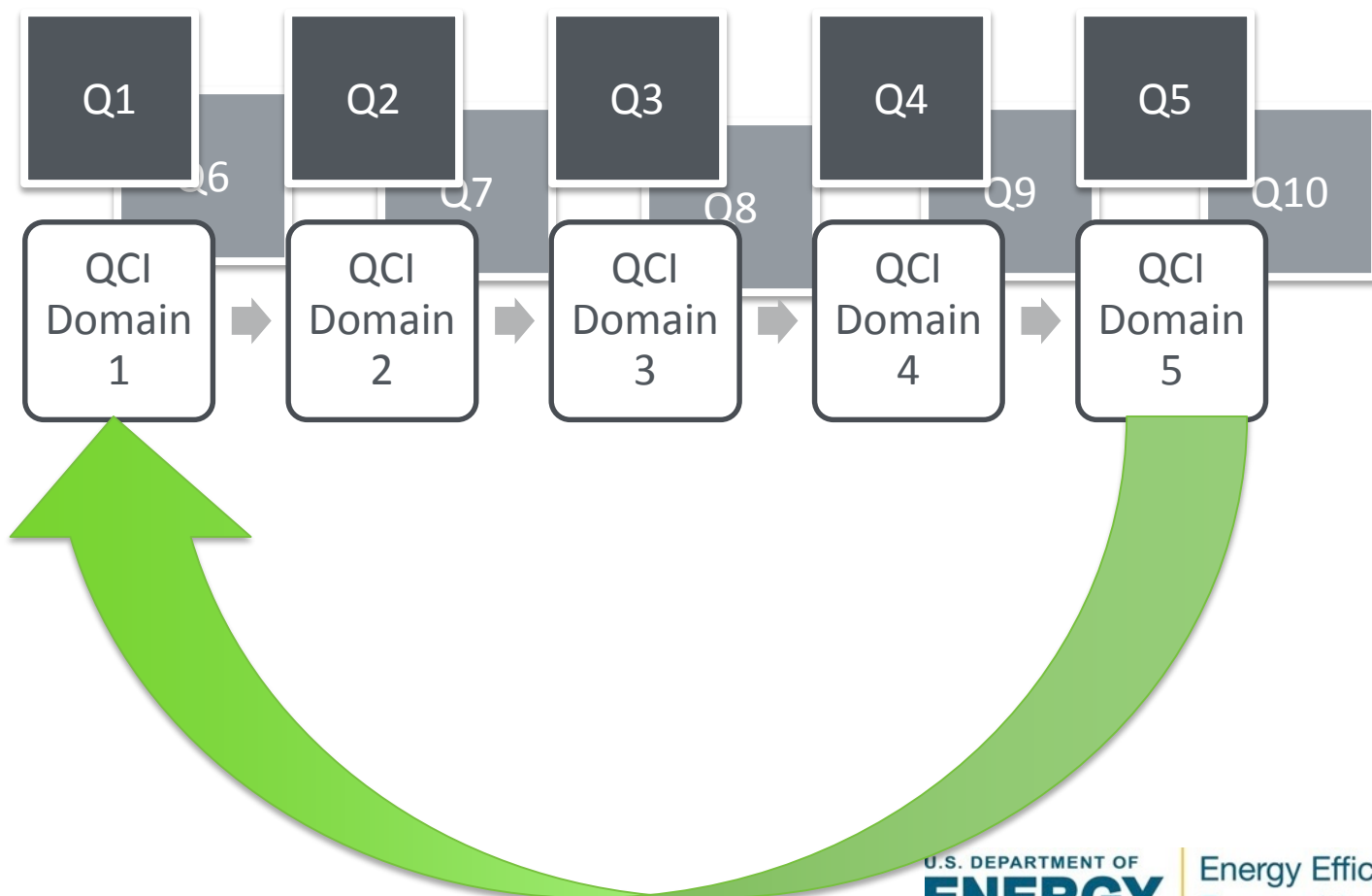


Cons:

- Network resistance.

Tier 1 Options

- Arrange for training delivery over the course of months to eventually cover entire JTA.



Long delivery schedule – Pros and Cons

Pros:

- Smaller times away from field.
- Rolling delivery good for staff turnover.



Cons:

- Additional time overall.
- Tracking.
- Testing/review issues.

Tier 1 Options

- Incorporate state-specific sessions into Tier 1 training to cover all technical training needs at once.



Incorporate state-specific sessions – Pros and Cons

Pros:

- Hit key issues while fresh in minds
- Address all training needs at once
- State staff = technical resource



Cons:

- Staff time for WTC reviews.
- Additional costs.
- May not always fit schedule.

<http://energy.gov/eere/wipo/quality-work-plan-requirements>

QUALITY WORK PLAN REQUIREMENTS

[Weatherization & Intergovernmental Programs Office Home](#)

[About the Office](#)

[Weatherization Assistance Program](#)

[Where to Apply for Assistance](#)

[What is Weatherization](#)

[Goals & Metrics](#)

[Pilot Projects](#)

[Success Stories](#)

[Guidelines for Home Energy Professionals](#)

[About the Project](#)

[Quality Work Plan Requirements](#)

[Standard Work Specifications](#)

[Certifications](#)

[Accredited Training](#)

[Project Benefits](#)

[Project Updates](#)

The U.S. Department of Energy's Weatherization Assistance Program (WAP) has introduced a comprehensive Quality Work Plan (QWP) that will establish a benchmark for quality home energy upgrades. This plan defines what is required when federal dollars are used to purchase weatherization services and leverages the resources developed through the [Guidelines for Home Energy Professionals](#) project. Below you will find links to QWP guidance, as well as links to the individual requirements.

This QWP not only defines how home energy upgrade work should be done, but it also provides a prescription for communication, training, and the inspection of work throughout the WAP network. The plan is aimed to address three critical questions:

- What does quality work look like?
- How should workers be trained?
- How should home energy upgrade work be verified?

LINKS TO QUALITY WORK PLAN GUIDANCE

- [WPN 15-4: Quality Work Plan Requirement Update](#) - Effective October 21, 2014: This guidance provides updates to WPN 14-4 issued December 2, 2013. This guidance supersedes 14-4 and describes requirements to support and verify quality work in the Department of Energy's (DOE) Weatherization Assistance Program (WAP).
- [2014 Quality Work Plan Update Presentation](#) - This presentation was given by Josh Olsen of the U.S. Department of Energy at the 2014 ACI National Home Performance Conference & Trade Show



GUIDELINES AND STANDARDS REQUIREMENT



COMMUNICATIONS REQUIREMENT



INSPECTION AND MONITORING REQUIREMENT



TRAINING REQUIREMENT

QUALITY WORK PLAN GUIDELINES AND STANDARDS REQUIREMENT

[Weatherization & Intergovernmental Programs Office Home](#)
[About the Office](#)
[Weatherization Assistance Program](#)
[Where to Apply for Assistance](#)
[What is Weatherization](#)
[Goals & Metrics](#)
[Pilot Projects](#)
[Success Stories](#)
[Guidelines for Home Energy Professionals](#)
[About the Project](#)
[Quality Work Plan Requirements](#)
[Standard Work Specifications](#)
[Certifications](#)
[Accredited Training](#)
[Project Benefits](#)
[Project Updates](#)
[Multifamily Retrofits](#)
[State Energy Program](#)
[Energy Efficiency & Conservation Block Grant Program](#)
[Tribal Energy Program](#)
[State & Local Solution Center](#)

The Weatherization Assistance Program's (WAP) comprehensive Quality Work Plan establishes a benchmark for quality home energy upgrades. The plan includes a Guidelines and Standards requirement that all WAP Grantees must meet. In this section you will learn more about this requirement and find resources and examples to help you meet this obligation in the field.



REQUIREMENT

All measures and incidental repairs performed on client homes must meet the specifications, objectives and desired outcomes outlined in the [Standard Work Specifications for Home Energy Upgrades \(SWS\)](#).

HOW TO MEET THIS REQUIREMENT

- Grantees will make available to subgrantees comprehensive field standards outlining Grantee expectations of work scope and quality. These field standards must meet or exceed the minimum standards outlined in the SWS.
- Grantees must revise their field guides and ensure that the relevant procedures in those guides will result in work that achieves the desired outcomes in the SWS. Field guides will reference the appropriate SWS for the procedure being described and clearly state the required specifications for that procedure.
- A variance may be requested for individual specifications by submitting a [SWS Variance Request Form](#) to the DOE Project Officer for review and approval.
- Tasks that are not listed in the SWS are not subject to this requirement.

GRANTEE CHECKLIST

This document walks Grantees through the Guidelines and Standards requirement of the Quality Work Plan.

- [Grantee Checklist for the Guidelines and Standards Requirement](#)

RESOURCES FOR MEETING THIS REQUIREMENT

Grantees should refer to the above Checklist for the Guidelines and Standards Requirement, however these resources may also be of assistance.

- [Standard Work Specifications \(SWS\) Online Tool](#)
- [How to align field guides and standards with the SWS](#) - This presentation demonstrates how to align field guides and standards to the SWS.
- [Using the NREL Field Guide Tool](#) - This presentation was given by Chris Baker at the 2014 NASCSP Mid-Winter Training Conference and includes reference to the online

JUMP TO THE OTHER QUALITY WORK PLAN REQUIREMENTS



**COMMUNICATIONS
REQUIREMENT**



**INSPECTION AND
MONITORING
REQUIREMENT**



**TRAINING
REQUIREMENT**

requirement

Resources

<http://www.waptac.org/Technical-Tools/DOE-Quality-Work-Plan.aspx>



The screenshot shows the WAPTAC (Weatherization Assistance Program Technical Assistance Center) website. The header features the WAPTAC logo on the left, a blue box with the text "TECHNICAL TOOLS" in the center, and a thermal image of a building on the right. Below the header is a navigation bar with links: WAP Basics, Rules & Guidance, Technical Tools, Public Information, Best Practices, Training Resources, Wx Plus Health, and Contacts. The main content area is titled "DOE Quality Work Plan Resources" and includes a paragraph about the Department of Energy's Weatherization Assistance Program instituting a comprehensive quality work plan. It also mentions the "Quality Work Plan (QWP)" and outlines requirements for high-quality home energy upgrade work. Below this, there is a section titled "Guidelines for Home Energy Professionals" which describes the DOE project's goal to establish a national residential energy upgrade industry and a skilled workforce. The page also includes a "Print this page" button and a "SHARE" button with social media icons.

WAPTAC
WEATHERIZATION ASSISTANCE PROGRAM
TECHNICAL ASSISTANCE CENTER

TECHNICAL TOOLS

WAP Basics Rules & Guidance Technical Tools Public Information Best Practices Training Resources Wx Plus Health Contacts

DOE Quality Work Plan Resources

The Department of Energy's Weatherization Assistance Program is instituting a comprehensive quality work plan that will establish the benchmark for quality home energy upgrades. DOE officially made available its new [Quality Work Plan \(QWP\)](#), which outlines the requirements for high-quality home energy upgrade work within the Weatherization Assistance Program (WAP).

The QWP defines what is required when federal dollars are used to purchase weatherization services and leverages the resources developed through the [Guidelines for Home Energy Professionals](#) project. These resources include [Standard Work Specifications for Home Energy Upgrades](#), [accredited training](#), and [advanced Home Energy Professional Certifications](#). The QWP not only defines how home energy upgrade work should be done, but it also outlines requirements for communication, training, and the inspection of work completed within the WAP program.

Guidelines for Home Energy Professionals

The DOE Guidelines for Home Energy Professionals project helps establish a national residential energy upgrade industry and a skilled and credentialed workforce. The project creates standard work specifications, advanced professional certifications for workers, and accredited training programs.

Print this page SHARE

In the end...



Technical Integrity = Program Integrity

- Define the work.
- Share the definition.
- Check the work.
- Provide access to training.