



VERMONT'S WEATHERIZATION PROGRAM

Technical Policies & Procedures Manual

(2020 Edition)

Acknowledgments

This manual was developed to provide greater clarity in program expectations to WAP providers and clients and to better ensure parity of services throughout the state of Vermont. This content represents a collective body of knowledge cultivated by hundreds of dedicated weatherization professionals spanning forty plus years. Many thanks are due to all who have worked for, and on behalf of, the Vermont WAP over the years.

Special Thanks

It would be difficult to convey adequate thanks to the past and present members of Vermont WAP's Technical Excellence Committee for all of the invaluable contributions—the content knowledge, mental effort and time—that they have invested into the original 2012 production and ongoing maintenance of this manual. Thank you!

Technical Excellence Committee Members (*Past & Present – Dating from 2012 – 2020*)

Robert “Chip” Adams	Southeastern Vermont Community Action
Hyle Bates	BROC—Community Action in Southwestern Vermont
Cory Boisvert	Capstone Community Action
Mike Brookman	BROC—Community Action in Southwestern Vermont
Sam Brookman	BROC—Community Action in Southwestern Vermont
Gordon Brown	Northeast Employment & Training Organization
Rob Buckley	BROC—Community Action in Southwestern Vermont
John Colby	Northeast Employment & Training Organization
Heather Desrosiers	Champlain Valley Office of Economic Opportunity
Randy Drury	3E Thermal
David Fowler	Capstone Community Action
Jeremy Francis	Champlain Valley Office of Economic Opportunity
Jonathon Goldhammer	Champlain Valley Office of Economic Opportunity
Jeff Hall	Northeast Employment & Training Organization
Dave Howe	BROC—Community Action in Southwestern Vermont
John Hyslop	Southeastern Vermont Community Action
Scott Hall	Capstone Community Action
Patrick LaDuc	Southeastern Vermont Community Action
Larry Martell	Champlain Valley Office of Economic Opportunity
Scot Rose	Champlain Valley Office of Economic Opportunity
Danielle Safford	Vermont Office of Economic Opportunity
Nathan Stoddard	Southeastern Vermont Community Action
Lawrence “Chip” Sullivan	Southeastern Vermont Community Action
Greg Wigginton	Champlain Valley Office of Economic Opportunity
Randy Winters	BROC—Community Action in Southwestern Vermont

Key Manual Contributors/Writers/Designers

Geoff Wilcox	Vermont Office of Economic Opportunity
Zack Green	Vermont Office of Economic Opportunity
Adam Harris (- on Appendix A -)	New York State Weatherization Directors Association
Lynn Bruce	Vermont Department for Children & Families

Principle Author & Manual Designer

Joshua Larose	Vermont Office of Economic Opportunity
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Introduction: A Guide to Using this Procedures Manual

A Note About Intent

Well trained and skilled people are and will continue to be the foundation of the Weatherization program's success. Thorough evaluation and diagnostic testing is critical to every job. Deciding what actionable steps to take in any given case with thoughtful consideration of all available information is essential.

The intent of this manual is to outline clarity in expectations in hopes that a clearly painted picture of ends-goals inspires creative solutions and innovations from the field that enable those goals to be met the majority of the time.

The intent of the policies and procedures outlined within this manual is not to disempower field staff, stunt creative problem solving or lock the program into a robotic approach to all WAP work.

In cases where the end-goals as defined in this procedure manual do not make good sense for an individual client or project, we challenge and encourage WAP network staff to identify a better way. Please outline an individualized scope of work and submit the plan for review to the OEO. A workplan that is well grounded in building science principles, suits a client's needs and presents an impactful investment will be viewed favorably.

Continuous programmatic improvement and maximized impact of our work is a vision that can come to fruition if we all work toward it together. If you are working through a challenging project and think you've identified a better way to solve the puzzle, please pursue it. We at the OEO will gladly work with you to ensure your innovations are crafted in a manner that is able to meet program obligations. Thanks to everyone in the weatherization network for the thoughtful decisions and heavy lifting being performed daily.



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Manual Overview

The main body of this manual contains 10 sections. Each section establishes minimum standards that must be met in order for a collection of prospective improvement measures to be classified as a weatherization project; more importantly, as an allowable, comprehensive, cost-effective, long-lasting and safe weatherization project.

The 10 primary sections are...

- Section 1: Top of Building
- Section 2: Bottom of Building
- Section 3: Sides of Building
- Section 4: Non-Energy Saving Measures
- Section 5: General Energy Waste Reduction Measures
- Section 6: Airsealing
- Section 7: Mechanical Ventilation
- Section 8: Mobile Home Policies & Procedures
- Section 9: Mobile Home Priority List
- Section 10: Quality Control Inspections

Sections 1, 2 & 3

Details the core “energy-saving-framework” for comprehensive weatherization projects by outlining program expectations related to the Top, Bottom & Sides of buildings.

Section 4

Establishes parameters for WAP project components that yield little-to-no energy savings on their own but that are often needed to ensure that comprehensive, cost-effective, long-lasting, and safe WAP projects are accomplished. Amongst other content areas, this section covers Health, Safety & Indoor Air Quality related policies.

Section 5

Outlines program policies for some basic low-cost measures that can save a little bit of energy when installed but that do not require a formal cost-benefit analysis on every single project. Some of the improvement measures installed during traditional Weatherization Assistance Program projects that are included in this measure category are funded by Efficiency Vermont—materials such as efficient light bulbs and low-flow showerheads.

Section 6

Outlines program policies related to building airsealing (*for site-built homes only*).

Section 7

Outlines program policies related to mechanical ventilation, including Vermont WAP’s application of the ASHRAE 62.2-2016 Standards.

Section 8

Outlines program policies that are specific to mobile homes and explains how to apply the information contained throughout the rest of the policy manual to mobile home projects.

Section 9

Vermont WAP’s—Department of Energy approved—Mobile Home Priority List.

Section 10

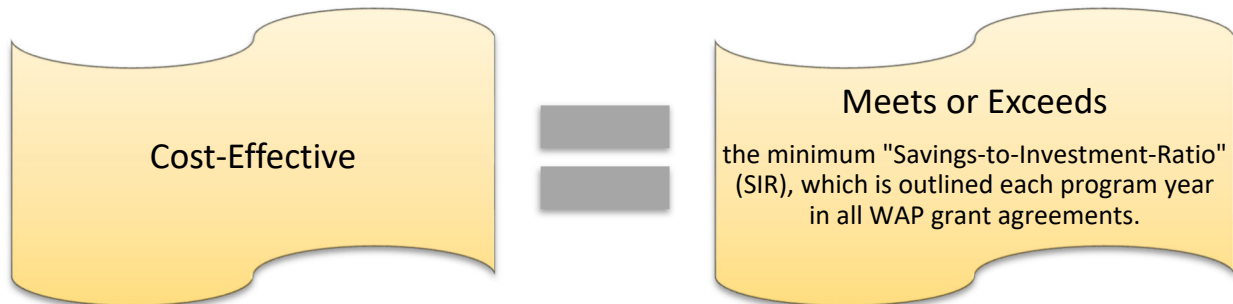
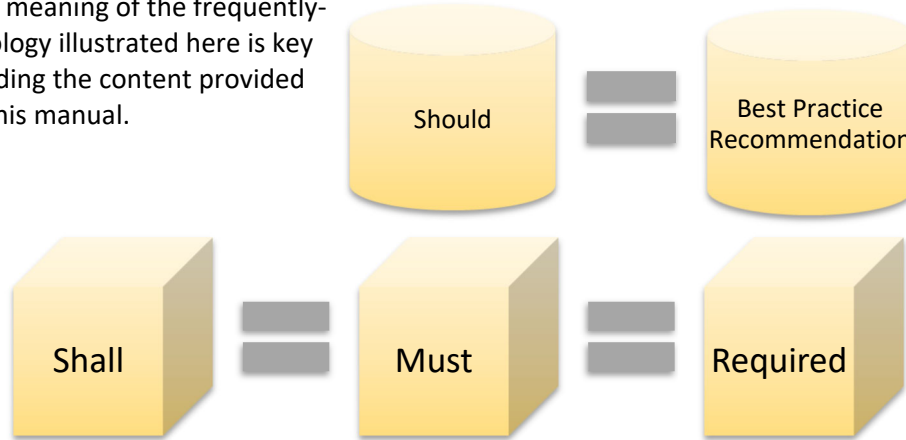
Outlines program policies related to Quality Control Inspections on WAP projects.



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Key Terminology

The intended meaning of the frequently-used-terminology illustrated here is key to understanding the content provided throughout this manual.



At the time this manual was issued, the minimum savings-to-investment ratio was established at 1.0.

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Program Rules

The following program rules apply unless policy exceptions are outlined for specific measures in subsequent sections of this manual.

Cost-Effectiveness Screening Requirements: Energy Saving Measures

All prospective energy saving measures shall be screened for cost-effectiveness using the Hancock Energy Audit Tool (HEAT) or a comparable—State of Vermont and Department of Energy approved—energy modeling software. Installation of prospective energy saving measures utilizing WAP funding is allowable when measures are screened as cost-effective in a site-specific energy model.

Cost-Effective Energy Saving Measures: Are They Required or Not?

Many improvement measures are required every time they are screened as cost-effective. But some measures are optional whenever they are cost-effective. Additional clarity on required versus optional improvement measures are provided throughout Sections 1-10 of this manual.

- ✓ Note that “optional” energy saving measures should only be included in weatherization projects when doing so will not prevent a WAP provider from maintaining the established maximum allowable job cost average (JCA) across a WAP grant period. Most commonly a WAP grant period is one year but occasionally there are exception to this. A maximum allowable JCA is established in every WAP grant.
- ✓ Energy saving measures should be prioritized for inclusion in a WAP project according to their “Savings to Investment Ratios” (SIRs), with priority given to measures with the highest SIRs.

Cost-Effectiveness Screening Requirements: Weatherization Projects as-a-Whole

There is a duality to the cost-effectiveness screening requirements for weatherization projects. Yes, individual energy saving measures need to be screened for cost-effectiveness. But a significant portion of the prospective improvements for many WAP projects are classified as Non-Energy Saving Measures. When delivery of a comprehensive, cost-effective, long-lasting, and safe WAP project requires multiple Non-Energy Saving Measures there may be a point where the project as-a-whole is no longer cost-effective. In some cases, projects that are not cost-effective have to be deferred and/or referred to other programs. Section 4 and Appendices, F & G thoroughly outline program policies related to non-energy saving measures, project as-a-whole screening requirements and WAP deferrals.



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Weatherization Standards: Typical Project Expectations Flow Chart

The graphic below illustrates the framework and flow of a typical weatherization project. More detail is provided on the first three pages of this introductory section and throughout this manual.

