

# NATIONAL ASSOCIATION FOR STATE COMMUNITY SERVICES PROGRAMS

# 2022

WINTER TRAINING CONFERENCE  
FEBRUARY 28 – MARCH 2

## EMPOWERING PEOPLE – CHANGING LIVES



[www.nascsp.org](http://www.nascsp.org)

## Weatherization Updates from the National Renewable Energy Laboratory



# Weatherization Updates From the National Renewable Energy Laboratory

---

Chuck Kurnik, Jal Desai, Allison Moe, Cory  
Chovanec, Juliana Williams

NASCSP 2022 Winter Conference

February 28-March 2, 2022

# Welcome and Introduction

---

Chuck Kurnik

# Chuck Kurnik

Senior Engineer



# Weatherization Team

**NREL provides technical assistance and research to support high-quality work and highly qualified workers in the weatherization and home performance industry.**

- Maintaining technical specifications and tools
- Developing innovative approaches to strengthen workforce skills and qualifications
- Collaborating with training providers
- Fostering continuous improvement throughout WAP.



The Weatherization Assistance Program (WAP) aims to reduce energy costs for low-income households by increasing their home energy efficiency, while ensuring health and safety standards.



## Technical

- Guidelines for Home Energy Professionals (GHEP):
  - Standard Work Specifications (SWS)
  - Worker Credentials.
- Weatherization Assistant Tool.



## Programmatic

- Continuous Improvement Workshops
- WAP Administrative Trainings
- Stakeholder Coordination.

Contact the weatherization team: [workforce.guidelines@nrel.gov](mailto:workforce.guidelines@nrel.gov).

# SWS and Certifications

---

Jal Desai and Kimberly Nelson

Jal Desai  
Researcher



# SWS

- The SWS represent consent-based guidance developed in accordance with industry best practices and intended to achieve higher-quality outcomes for home weatherization.
- **Periodically reviewed to capture current best practices** recommended by the network, as well as to promote consistency across the industry, including training centers.
- **SWS field guides are used to implement Weatherization Assistance Program (WAP)-funded work** that aligns with SWS content.

## SWS Website Activity Overview

FY 21  
Statistics  
(Oct 2020-  
Sep 2021)

Pageviews:



**124,043**

Total Visits:



**28,913**

Total Visitors:



**16,953**

Average Time  
on Site:



**4:26**

# SWS Spanish Version

- Released February 2021
- Details, subtopics, and specifications.

## Standard Work Specifications



HOUSING TYPE ▾

Search



Health & Safety ▾

Air Sealing ▾

Insulation ▾

Heating & Cooling ▾

Ventilation ▾

Baseload ▾

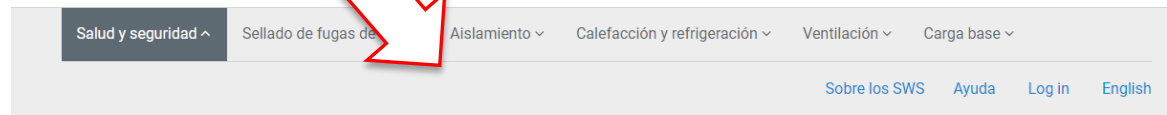
About

Help

Log in

Español

Use the Standard Work Specifications (SWS) tool as an industry guide to ensure work performed during home energy upgrades is effective, durable, and safe. To view SWS 2017, please visit the [SWS 2017 legacy website](#).



Expand all Collapse all

1 - Uso de las especificaciones de trabajo estándar

2 - Salud y seguridad

2.01 - Dispositivos de seguridad

Detectores de humo

Detectores de monóxido de carbono (CO)

Calentamiento de agua

2.02 - Humedad

2.03 - Eléctrico

2.04 - Radón

Salud y seguridad > Dispositivos de seguridad > Detectores de humo

## Subtopic 2.0101 Detectores de humo

### 2.0101.1 Detectores de humo cableados (interconectados)

**Desired Outcome:** Detectores de humo interconectados correctamente seleccionados e instalados

**Available In:** Single Family Site-Built Housing, Manufactured Housing, Multifamily Housing

### 2.0101.2 Detectores de humo a batería

**Desired Outcome:** Detectores de humo a batería correctamente seleccionados e instalados

**Available In:** Single Family Site-Built Housing, Manufactured Housing, Multifamily Housing

# SWS Field Guide

- Create and customize a field guide
- Field guide customization:
  - Title
  - Housing type
  - Public or private
  - Organization/authority name
  - Logo
  - Cover page
  - Disclaimer
  - Detail images
  - Detail custom text.

Standard Work Specifications

HOUSING TYPE ▾ Search SEARCH

Health and Safety ▾ Air Sealing ▾ Insulation ▾ Heating and Cooling ▾ Ventilation ▾ Baseload ▾ My Account ▾

## Field Guides

CREATE NEW FIELD GUIDE

My Field Guides Community Field Guides

Name	SWS Version	Housing Type	Author	PDF	Edit
2020 SWS - Manufactured Housing - All Specifications	2020	Manufactured Housing	Zachary Peterson (NREL)	<a href="#">Download PDF</a>	SELECT ACTION ▾
2020 SWS - Multifamily Housing - All Specifications	2020	Multifamily Housing	Zachary Peterson (NREL)	<a href="#">Download PDF</a>	SELECT ACTION ▾
2020 SWS - Single Family Site-Built - All Specifications	2020	Single Family Site-Built Housing	Zachary Peterson (NREL)	<a href="#">Download PDF</a>	SELECT ACTION ▾

- Downloadable as a PDF
- Sign up for a free account to create a field guide and access community field guides
- Learn how to create a field guide on the [SWS Help page](https://sws.nrel.gov/help): <https://sws.nrel.gov/help>.

# Updates

- The SWS Version 2017 (SWS v.2017) **legacy website** will no longer be available from October 1, 2022.
- The 2017 SWS version can be accessed as a PDF for each housing type until then.
- .CSV and .XSLX export options for the 2020 SWS version are coming soon.
- The SWS are maintained to ensure they continue to reflect industry-accepted practices. Industry stakeholders are encouraged to suggest revisions to the SWS by submitting comments. The deadline to submit comments is **September 30, 2022**.

To provide feedback, email:  
[workforce.guidelines@nrel.gov](mailto:workforce.guidelines@nrel.gov).

# DOE WAP Installer Badges Toolkit

---

Jal Desai

# Installer Badges Toolkit

- The Badges Toolkit for home retrofits consists of 25 "badges."
- Each badge defines a task or measures an installer could perform on a home.
- The badges encourage greater flexibility in the training of installers by allowing them to focus only on those measures that are installed in their program or profession.

Work Lead-Safe.....	.....
Air Seal Attic Floor .....	.....
Seal and Dam High-Temperature Heat Sources in Attic.....	.....
Prep Attic Floor for Insulation.....	.....
Treat Attic Hatch .....	.....
Insulate Attic Floor and Pass Inspection First Time.....	.....
Insulate the Ceiling of a Manufactured Home.....	.....
Seal and Insulate Knee Walls .....	.....
Install Dense-Pack Sidewall Insulation .....	.....
Insulate the Walls of a Manufactured Home .....	.....
Install Weather Stripping and Sweep Set on Exterior Door .....	.....
Air Seal and Insulate Walls of a Conditioned Subspace (Basement or Crawlspace)..	.....
Air Seal Floor Above Unconditioned Subspace (Basement or Crawlspace) .....	.....
Insulate the Floor Above an Unconditioned Subspace (Site Built Single Family) .....	.....
Insulate the Belly of a Manufactured Home.....	.....
Install or Repair Vapor Retarder in a Subspace .....	.....
Vent Clothes Dryer to the Exterior.....	.....
Install Ducting for Bath or Kitchen Range Fan.....	.....
Air Seal Ducted Distribution System .....	.....
Insulate Ducted Distribution System.....	.....
Install Window or Exterior Door.....	.....
Repair/Replace Cracked or Broken Glass .....	.....
Insulate a Water Heater Tank and First Six Feet of Pipes.....	.....
Install Low-Flow Faucet Aerators or Showerhead.....	.....
Install Exterior Roof Penetration (e.g., roof vents or bath fan termination).....	.....

# Installer Badges

- Feedback received from users who have downloaded the toolkit so far:
  - Organize a conference to work one-on-one with training centers or grantees to help them customize the content or process and motivate the end users.
  - Create multimedia training for each badge.
  - Badges Toolkit's implementation depends on how employers integrate the Badges Toolkit to motivate their crews.
  - Badges Toolkit should be promoted as webinars using case studies.
  - Include best practices for each badge along with visualizations.
  - Badges Toolkit will help in overall program improvement as it places the responsibility of the skills back on the worker.
  - Concerns over how to define a "qualified supervisor".

# Resources and Updates

- Aligned with updated [SWS](#) version and other relevant standards. Since 2019, 225+ users have downloaded the Badges Toolkit.
- Job aids associated with Badges (single-family) will be published on the website soon.

1-1

## Interior Lead-Safe Weatherization

ALIGNS WITH LEAD RRP



**1**  Move all objects out of work area or cover with plastic sheeting. Seal all edges and seams.

**2**  Use disposable physical barriers to mark out and contain work area and contain debris.

**3**  Six feet in any direction from the work area, cover surfaces with plastic sheeting, taped in place, including HVAC access points. Close and cover windows.

**4**  Block off access doorways and install zippers to contain debris in work area.

**5**  **CAUTION**  
RENOVATION WORK  
DO NOT ENTER WORK AREA  
UNLESS AUTHORIZED  
NO SMOKING, EATING, OR  
DRINKING

**6**  Tack pad  
Use tack pads at access points to containment area to minimize dust and debris being tracked outside area.

Tools and materials listed are only recommendations and may not include everything needed to complete the job.

1-1 Interior Lead-Safe Weatherization / 1

# Resources and Updates

- Installer Badges: [https://sws.nrel.gov/installerbadges.](https://sws.nrel.gov/installerbadges)
- Factsheet: [https://sws.nrel.gov/sites/default/files/2021-05/Installer-Badges-Toolkit-Fact-Sheet.pdf.](https://sws.nrel.gov/sites/default/files/2021-05/Installer-Badges-Toolkit-Fact-Sheet.pdf)
- Webinar: [https://www.youtube.com/watch?v=plt-wRPBy\\_A.](https://www.youtube.com/watch?v=plt-wRPBy_A)

# Home Energy Professional (HEP) Certifications

---

Jal Desai

# Energy Auditor (EA) and Quality Control Inspector (QCI)

- The EA/QCI scheme committee is responsible for the continued maintenance of the scheme in accordance with the ISO/IEC 17024 and additional requirements (for, e.g., identifying the appropriate assessment method, prerequisites, code of conduct, etc.). A new EA/QCI scheme committee has been selected for the 2022-26 term.
- The EA/QCI scheme committee has begun the revision process for the Single-Family EA and QCI Job Task Analyses (JTAs), which will be completed by the end of this year. The revised JTAs will be validated and rolled out in the EA and QCI exams by the end of next year.
- **NOTE: “Site supervisor” credential recently rolled out by BPI is not required or endorsed by DOE for the WAP work.**

Resources:

<https://www.energy.gov/eere/wipo/guidelines-home-energy-professionals-accredited-training>

# Continuous Improvement and Program Support

---

Allison Moe

# Allison Moe

Project Manager



# 2022 Continuous Improvement Workshops

Through NREL, DOE is continuing to engage with the WAP network on improving program implementation through the Continuous Improvement Workshops.

In 2022 there will be two workshops, both virtual, and both open to all WAP stakeholders:

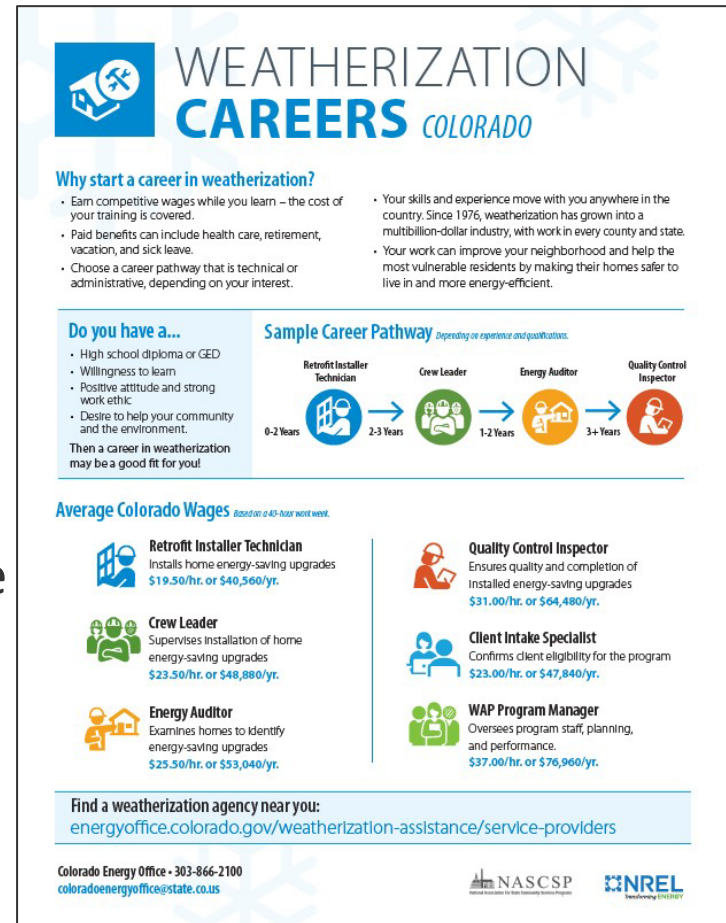
- Workshop #1: Wednesday May 4, 2022
  - Topic: Workforce Development
- Workshop #2: Wednesday, August 17, 2022
  - Topic: The Future of WAP

Workshop Applications are due March 16.

# Weatherization Careers Flyer

NREL coordinated with NASCSP to develop a series of weatherization careers flyers to assist WAP agencies in recruiting employees.

- Basic information about weatherization careers
- State-specific wage data for different field and administrative positions
- Editable and noneditable versions for individual agencies.



**WEATHERIZATION CAREERS COLORADO**

**Why start a career in weatherization?**

- Earn competitive wages while you learn – the cost of your training is covered.
- Paid benefits can include health care, retirement, vacation, and sick leave.
- Choose a career pathway that is technical or administrative, depending on your interest.
- Your skills and experience move with you anywhere in the country. Since 1976, weatherization has grown into a multibillion-dollar industry, with work in every county and state.
- Your work can improve your neighborhood and help the most vulnerable residents by making their homes safer to live in and more energy-efficient.

**Do you have a...**







- High school diploma or GED
- Willingness to learn
- Positive attitude and strong work ethic.
- Desire to help your community and the environment.

Then a career in weatherization may be a good fit for you!

**Sample Career Pathway** *Depending on experience and qualifications.*

Retrofit Installer Technician (0-2 Years) → Crew Leader (2-3 Years) → Energy Auditor (1-2 Years) → Quality Control Inspector (3+ Years)

**Average Colorado Wages** *Based on a 40-hour work week.*

 <b>Retrofit Installer Technician</b> Installs home energy-saving upgrades \$19.50/hr. or \$40,560/yr.	 <b>Quality Control Inspector</b> Ensures quality and completion of installed energy-saving upgrades \$31.00/hr. or \$64,480/yr.
 <b>Crew Leader</b> Supervises installation of home energy-saving upgrades \$23.50/hr. or \$48,880/yr.	 <b>Client Intake Specialist</b> Confirms client eligibility for the program \$23.00/hr. or \$47,840/yr.
 <b>Energy Auditor</b> Examines homes to identify energy-saving upgrades \$25.50/hr. or \$53,040/yr.	 <b>WAP Program Manager</b> Oversees program staff, planning, and performance. \$37.00/hr. or \$76,960/yr.

Find a weatherization agency near you:  
[energyoffice.colorado.gov/weatherization-assistance/service-providers](http://energyoffice.colorado.gov/weatherization-assistance/service-providers)

Colorado Energy Office • 303-866-2100  
[coloradoenergyoffice@state.co.us](mailto:coloradoenergyoffice@state.co.us)

NASCSP  
National Association of State Community Development Agencies

NREL  
National Renewable Energy Laboratory

NASCSP will make the flyers available to Grantees that responded to the 2021 wage survey.

# Priority Lists for Small Multifamily Buildings

In the fall of 2021, NREL convened a technical review panel of WAP stakeholders to provide feedback on new Priority Lists drafted by DOE.

The Priority Lists establish a set of Energy Conservation Measures (ECMs) that can be completed on small multifamily buildings without an energy audit.

There are three regional Priority Lists for hot, moderate, and cold climates.



(Photo by Dennis Schroeder / NREL)

The new small multifamily Priority Lists are currently under final review by DOE.

# Workforce Support

---

Cory Chovanec

**Cory Chovanec**  
Energy Market and Policy Analyst





## Administrative Training Continuing Education Credits (CEUs)

- Home Energy Professional EA and QCI Learning Pathways
- 13 pre-approved courses (pending)
- Eligible courses:
  - 9 EA = 2.41 CEUs
  - 13 QCI = 3.41 CEUs.
- Learners to earn CEUs upon course completion and successful quiz score.
- NREL will submit earned CEUs to the Building Performance Institute (BPI) monthly.

# Administrative Training CEUs

- Create an account for free access to WAP training:  
<https://wap.litmos.com/self-signup>.
- Self-paced (average 15 minutes per course).

ENERGY.GOV  
Office of  
ENERGY EFFICIENCY &  
RENEWABLE ENERGY

Weatherization Assistance Program

Dashboard Content People Teams Reports

Courses / Weatherization Budget Basics

**Weatherization Budget Basics** ⓘ  
Effective budget management is a key aspect of a compliant program. During this course, you will learn about the latest regulations and program requirements.  
Estimated time: 15 minutes  
[Preview Course](#)

Content People Learning Paths Teams Proficient Instructors Noticeboard Additional References

## Administrative Training CEUs

### EA/QCI-Aligned Course Titles:

- Federal Statutes, Regulations, and Grant Guidance
- Weatherization Budget Basics
- Managing Multiple Funding Streams
- It's a Deferral, What Next?
- The House as a System
- Understanding the Savings to Investment Ratio
- Is Your Work Order in Order?
- Managing Subcontractors
- Maintaining Complete Job Files.

## Administrative Training CEUs

### QCI-Aligned Course Titles:

- Show me the Money!  
Reconciling Invoices
- Support Quality Work  
Through Training and  
Technical Assistance Funds
- Request the Right Training  
for Your Agency
- Identifying Work Quality  
Issues.



## Weatherization Jobs Analysis

NREL will be engaging the WAP network to better understand current and future workforce staffing needs.

- Data collection planned for late spring/early summer 2022:
  - Grantees
  - Subgrantees
    - Contractors
  - Training Providers.

# Grantee Training

---

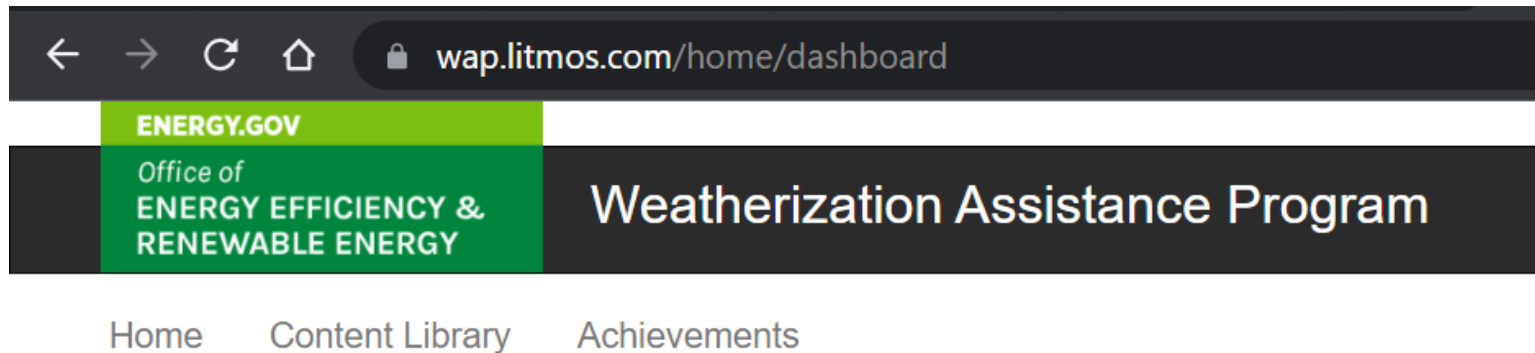
Juliana Williams

# Juliana Williams

Energy Markets and Policy Analyst



# Grantee Trainings



NREL, with support from IREC and NASCSP, is developing a series of online Grantee Trainings, to be available at: <https://wap.litmos.com>.

Course topics include:

- Grantee Plan Development
- Monitoring
- Quality Work Plan
- Technical Resources.

The courses will be piloted in April 2022. To participate in the pilot, email **Laure Jeanne Davignon** at [laurejeanne@irecusa.org](mailto:laurejeanne@irecusa.org).

# DOE Newsletters

Sign up for Weatherization updates from DOE at:  
<https://public.govdelivery.com/accounts/USEERE/s/underwriter/new>.

# Thank you!

---

[www.nrel.gov](http://www.nrel.gov)

NREL/PR-6A20-81903

This work was authored by the National Renewable Energy Laboratory, operated by Alliance for Sustainable Energy, LLC, for the U.S. Department of Energy (DOE) under Contract No. DE-AC36-08GO28308. Funding provided by U.S. Department of Energy Office of Energy Efficiency and Renewable Energy Weatherization and Intergovernmental Programs Office. The views expressed in the article do not necessarily represent the views of the DOE or the U.S. Government. The U.S. Government retains and the publisher, by accepting the article for publication, acknowledges that the U.S. Government retains a nonexclusive, paid-up, irrevocable, worldwide license to publish or reproduce the published form of this work, or allow others to do so, for U.S. Government purposes.

