EPA Burn Wise Program: Tool to Educate and Empower

Residential Wood Smoke Workshop
March 11, 2020
New Orleans, LA
Presentation Overview

• Burn Wise Tools and Uses
• Wood Moisture Content Guessing Game
• What’s working and what’s missing?
What is Burn Wise?

- Voluntary Education Partnership Program

- Key Message: *Burn the right wood, the right way, in the right appliance*

- Goals:
  - educate users on how to properly use their wood burning
  - promote upgrades to cleaner burning technologies
Burn Wise Message

Right wood  
right way  
right appliance
Burn Wise Education Program

• Target audience

  Current and future owners of wood burning appliances
  • Fireplaces
  • Wood Stoves
  • Hydronic Heaters/Outdoor Wood Boilers
  • Forced Air Furnaces
  • Outdoor fire-pits/chimeneas
Changing Behavior: What’s in it for me?

• Improved health
• Save time, energy and/or money
• Safety, reduce risk
• Adhere to social norms
Health: Wood Smoke & Your Health Poster

Wood smoke may smell good but it's not good for you. With a few simple steps you can help reduce wood smoke to protect your health and the air we breathe.

Tiny particles in wood smoke can affect your health

HEART IMPACTS
Increases the risk of heart attack, irregular heartbeat, heart failure, stroke and early death.

LUNG IMPACTS
Triggers asthma attacks and aggravates other lung diseases and damages children’s lungs.

WHO IS AT GREATER RISK?
Older adults
Children and teens
People with heart or lung disease

Four easy steps to reduce wood smoke

1. Burn dry, seasoned wood that has been split, stacked, covered and stored.
2. Test wood with a moisture meter (20% moisture or less is best).
3. Use a cleaner-burning gas or wood stove.
4. Provide sufficient air to the fire; never let it smolder.

Learn more at www.epa.gov/burnwise
Asthma and Wood Smoke Videos

Videos

- Wood Smoke and Asthma:
  - Breathe Easier [http://www.youtube.com/watch?v=sJQ4IVDDA6Q](http://www.youtube.com/watch?v=sJQ4IVDDA6Q)
  - Reduce Smoke [http://www.youtube.com/watch?v=aJXj9j3g7EM](http://www.youtube.com/watch?v=aJXj9j3g7EM)
  - Dry Firewood [http://www.youtube.com/watch?v=Z-OfbPjXPUU](http://www.youtube.com/watch?v=Z-OfbPjXPUU)
Time and Money: Wet Wood is a Waste - Brochure and Video
Build a Firewood Storage Shed - Plans and Materials List

To view a 6 minute video on how to build this firewood storage shed, go to: www.epa.gov/burnwise/burn-wise-videos

Link to video demonstrating how to build this shed: https://www.epa.gov/burnwise/burn-wise-videos
Test Your Wood with a Moisture Meter

Burn Wise: Test Your Wood with a Moisture Meter

Why should I use a wood moisture meter?

Burning wet wood is a waste of energy. Wood burns most efficiently when the moisture content is between 15% - 20%. When a log feels cool to the touch, it is generally dry enough to burn safely. Too much water in the wood reduces the temperature in the stove, preventing the wood from completely burning. Incomplete combustion results in smoke (wasted energy) going up the chimney and creates creosote (a fire hazard). The smoke can also negatively impact your air quality inside and outside your home.

How do I test my firewood with a wood moisture meter?

Split the wood, then shortly after (less than 14 hours), stick the prongs of the wood moisture meter into the wood split side of the wood. This ensures you are testing the inside of the wood and not just the outer layer of the wood. Also, stick the wood so the prongs are parallel with the grain of the wood and test 3-4 different locations for the most accurate reading. Repeat until the wood has the outside temperature of 15% - 20%. Lower wood temperatures result in lower indicated moisture content. See correction table: http://www.drdwars.com/correction_tables.html

How to Season Your Firewood?

To season your wood, split (split wood dries much faster), stack, cover the top and store your wood for at least 6-12 months. For more information go to: http://www.epa.gov/burnwise

“How-to” Burn Wise video also available

https://www.epa.gov/burnwise/burn-wise-other-materials
Safety: Does Your Wood Stove Have Dirty Little Secret Brochure

Retailers Can Help You
A hearth retailer can guide you through the wood stove removal and replacement process. With hundreds of stoves to choose from, the variety and cost ranges are wide — from $1,000 to $3,000 before installation. Some local governments and agencies offer incentives for replacement.

Professional Installation Matters
Improperly installed stoves or chimneys can spill smoke back into your home or cause a house fire. A hearth specialty retailer can arrange professional installation by a trained technician or one certified by the National Fireplace Institute.

“Stoves and chimneys should be inspected by a certified chimney sweep once a year to prevent chimney fires.”
— Chimney Safety Institute of America
Social Norms: Wood Smoke Activity Book
Who is Promoting the Burn Wise Message?

- EPA Headquarters & Regions
- States, Tribes and Local Agencies
- Chimney Sweeps
- Non-profit Organizations
- Hearth, Patio, and Barbecue Association
- Hearth Retailers & Manufacturers
How to Apply the Burn Wise Messages

• Make printed educational materials available at all your outreach events

• Post Burn Wise logo and website link on your organization’s website

• Share Burn Wise message on social media
  – Post EPA ready-made messages on Facebook and Twitter

• Conduct educational campaign in conjunction with all wood burning appliance replacement programs
High Wood Moisture Leads to Poor Combustion

- Ideal combustion, moisture content is between 15%-20%

Photo credit: Hearth, Patio and Barbecue Association
Wood Moisture

6 lbs of unseasoned red oak at 45% moisture contains how much water?

Photo credit: EPA
Wood Moisture

36 lbs of unseasoned red oak at 45% moisture contains approximately 2 gallons of water

Photo credit: EPA

What do we use to put out fires?
Burn Wise Program and Educational Tools

• What’s working and what’s needed?

• How can Burn Wise support you?