

EPA Burn Wise Program: Products and Partnerships

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Wood Smoke Workshop
March 6, 2018

What is Burn Wise?

- Voluntary Education Partnership Program
- Key Message: Learn Before You Burn -
Burn the right wood, the right way, in the right appliance
- Goal:
 - educate users on how to properly use their wood burning
 - promote upgrades to cleaner burning technologies

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 (limited)

What Burn Wise Materials are Available?

- Tip Sheet
- Posters
- Brochures
- Postcard
- Tear Pads
- Wood Shed Construction Plans
- Videos

* Free hard copies are currently available for most tools



Learn Before You Burn Poster

Overview

- Poster encourages wood burners to “Burn the right wood, the right way, in the right appliance” and outlines 3 benefits and a call to action
 - Available in English
 - Size: 17” X 11”



<https://www.epa.gov/burnwise/burn-wise-posters>

Burn the Right Wood Tear Sheet

Overview

- Same message as “Learn Before You Burn” poster
- Quick tips for homeowners
 - Developed in partnership with the Chimney Safety Institute of America and National Fireplace Institute
 - Available in English
 - Size: 3 1/2” X 8 1/2”



<https://www.epa.gov/burnwise/burn-wise-other-materials>

Burn Wise Tip Sheet

Overview

- Basic tips for starting a fire, seasoning wood, proper operation and maintenance of wood stove, and upgrading to a cleaner burning appliance
 - Available in Spanish (online) and English
 - Size: 8 1/2" X 11"



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BURN THE RIGHT WOOD, THE RIGHT WAY, IN THE RIGHT WOOD-BURNING APPLIANCE

Did you know that by changing the way you burn wood you can save money, reduce air pollution and protect your health?

Here are a few simple tips to make your fire burn hotter, keep your wallet fatter and keep your local air cleaner and healthier.

-  **Season all firewood.** All firewood should be split, securely covered or stored, and aged for at least six months. Seasoned wood burns hotter, cuts fuel consumption and reduces the amount of smoke your appliance produces.
-  **Choose the right firewood.** Hardwoods are the best. Never burn trash or treated wood which can emit toxic air pollutants.
-  **Start it right.** Use only clean newspaper or dry kindling to start a fire. Never use gasoline, kerosene, charcoal starter, or a propane torch.
-  **Don't let the fire smolder.** Many people think they should let a fire smolder overnight. But reducing the air supply does little for heating and increases air pollution.
-  **Clean ashes from your wood-burning appliance.** Excess ashes can clog the air intake vents reducing efficiency. Be sure to dispose of ashes in a metal container away from the house or any flammable material to reduce the risk of fire.
-  **Keep your chimney clean.** A clean chimney provides good draft for your wood-burning appliance and reduces the risk of a chimney fire. Have a certified professional inspect your chimney once a year.
-  **Be a good neighbor.** Follow best practices for burning wood. Always remember to comply with state and local codes and check your local air quality forecast.
-  **Follow instructions.** Operate your wood-burning appliance according to the manufacturer's instructions and follow all maintenance procedures.
-  **Upgrade to cleaner equipment.** EPA-certified wood stoves and fireplace inserts burn cleaner and burn wood more efficiently emitting less particle pollution than older models.
-  **Size matters.** Choose the right-sized appliance for your needs. If your wood-burning appliance is too big for your room or house, the fuel will smolder and create more air pollution.

 For more information on how to burn wise, go to www.epa.gov/burnwise

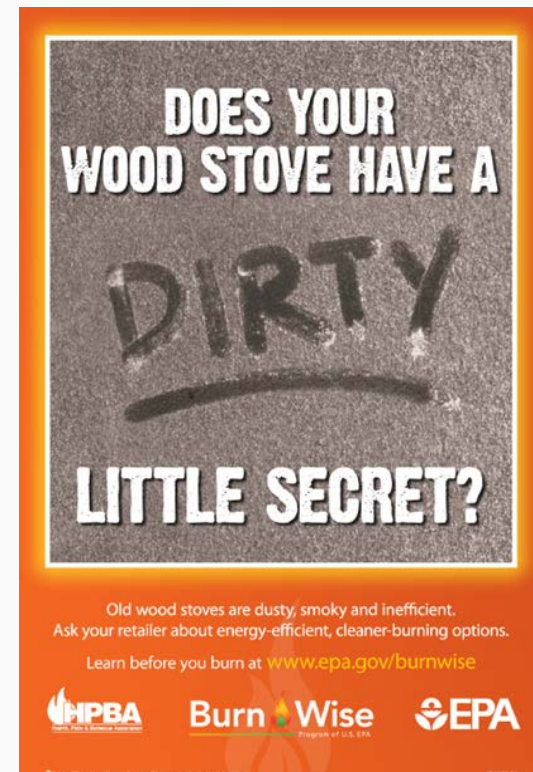
EPA-456/F-09-004

<https://www.epa.gov/burnwise/tip-sheets>

Your Old Wood Stove's Dirty Little Secret Poster

Overview

- Poster focuses attention to the issue of old stoves
- Ideally the similar brochure would accompany this poster
- Explains why it is important to upgrade to a new stove
 - Available in English
 - Size: 17" X 11"



<https://www.epa.gov/burnwise/burn-wise-posters>

Your Old Wood Stove's Dirty Little Secret Brochure

Overview

- Spells out the benefits of replacing an uncertified wood stove with a cleaner burning option like an EPA-certified wood stove
 - Available in Spanish (online) and English
 - Size: 8 1/2" X 11"



<https://www.epa.gov/burnwise/burn-wise-brochures>

Wet Wood Is A Waste Brochure

Overview

- Provides four simple steps to properly dry firewood
 - Available in Spanish (online) and English
 - Size: 8 1/2" X 11"



<https://www.epa.gov/burnwise/burn-wise-brochures>

Don't Let Your Investment Go Up in Smoke Tear Sheet

Overview

- Tear sheet has a similar message to our “Wet Wood is a Waste” brochure
 - Developed in partnership with the United States Forest Service for fire wood permit holders
 - Available in English
 - Size: 3 1/2” X 8 1/2”



<https://www.epa.gov/burnwise/burn-wise-other-materials>

Split, Stack, Cover and Store Video

Overview

- Demonstrates four simple steps to properly dry firewood
- Wet wood can create excessive smoke, which is wasted fuel
- The “Wet Wood is a Waste” brochure relays the same message

Video

<http://www.youtube.com/watch?v=y01--Zrh11s>



Build a Firewood Storage Shed - Plans and Materials List

Overview

- Provides a list of the materials, cost, photo and simple schematics for building a wood shed holding about one cord of wood

- Available in English
- Size: 8 1/2" X 11"

Build a Firewood Storage Shed

\$270
(price dependant on locality)

Wood Shed
(price dependant on locality)

- Holds about one cord of wood
- Light enough to move by hand
- Easy to fabricate with mostly straight cuts and no mitered corners or joints
- Uses outdoor treated wood for the structure and liquid roofing primer for the roof
- Connectors and fasteners are galvanized
- Roof and sides are finished to owner specifications (e.g. composition, metal, wood shakes, etc.)
- Footings provided by owner (concrete post bases or pavers)

www.epa.gov/burnwise

ITEM	QTY	DESCRIPTION	UNIT COST	SUBTOTAL
2" x 6" x 8' Treated Pine	12	Floor Frame	\$5.27	\$10.54
1" x 4" x 8' Treated Pine	18	Floor Slats, Side & Back Slats	\$4.97	\$64.61
2" x 4" x 8' Treated Pine	8	Floor Frame, Joists, Roof Rafters	\$3.37	\$26.96
4" x 4" x 12' Treated Pine	3	Posts	\$13.17	\$39.51
4" x 8" x 12' CDX Plywood	3	Roof	\$15.77	\$15.77
1/2" x 5" Hex Lag Screws	12	Secure posts to 2" x 6" 2" x 4" floor frame	\$0.54	\$6.48
3" Galvanized Deck Screws	1lbs. Box	Secure Floor Frame, Joists & Roof Rafters	\$3.89	\$3.89
1 1/2" Galvanized Deck Screws	1lbs. Box	Secure Floor Slats, Side & Back Slats, Roof	\$3.89	\$3.89
Liquid Roofing	1.5 Gal	Weather Protection	\$47.00	\$47.00
12" Deck Bolts	6	Raise Woodshed off ground	\$6.55	\$39.30
		TOTAL		\$269.95

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

Based on and modified from the Anokah tribe's Modular Wood Shed design

<https://www.epa.gov/burnwise/burn-wise-other-materials>

Link to video demonstrating how to build this shed: <https://www.epa.gov/burnwise/burn-wise-videos>

Test Your Wood with a Moisture Meter

Overview

- Outlines the benefits of knowing the wood moisture content and how to properly test firewood using a moisture meter.
 - Available in English
 - Size: 8 1/2" X 11"

“How-to” Burn Wise video also available

<https://www.epa.gov/burnwise/burn-wise-other-materials>

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 live tree is cut the moisture content can be greater than 50%, (i.e., half of the weight of the wood is water).




Too much water in the wood reduces the temperature in the stove preventing the wood from completely burning (water puts out fires). 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.



Burn drier. Burn better.
Use dry wood for a cleaner fire with more heat and less smoke.

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

Split the firewood, then shortly after (less than 24 hours), stick the prongs of the wood moisture meter into the newly 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 run parallel with the grain of the wood and test 2-3 different locations for the most accurate reading. If possible, test the wood when the outside temperature is 50°F - 90°F. Lower wood temperatures result in lower indicated moisture content. See correction table: <http://www.delmhorst.com/correction-tables#temperature>. You can purchase a basic moisture meter online or at most hardware stores for around \$15.00 - \$40.00.

Step 1: Split the wood	Step 2: Test <u>newly</u> split side	Ready to Burn	Not Ready to Burn
			

 **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>.
Burn Wise: Split, Stack, Cover and Store Video- <http://www.youtube.com/watch?v=y01-Zrh11s>

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How to Use a Moisture Meter Video

Overview

- Tips on how to properly use a moisture meter to test firewood moisture levels
- Burning dry, seasoned firewood with a moisture content of 20% or less can save money and help reduce harmful air pollution - indoors and out

Video

<http://www.youtube.com/watch?v=jM2WGgRcnm0>



Wood Smoke Activity Book

Overview

- Children can read the story about best burning practices, color the pictures, and do the activities included in this activity book.
 - Available in English
 - Size: 8" X 11" or 8" X 7", 16 pages



<https://www.epa.gov/burnwise/wood-smoke-activity-book>

Learn Before You Burn Postcards

Overview

- Postcards are a great reminder for homeowners to schedule an annual chimney inspection
 - Developed in partnership with the Chimney Safety Institute of America (CSIA)
 - Available in English
 - Size: 6" X 4"



LEARN Before You Burn

- 1 Burn the right wood**
Burn only dry, well-seasoned wood that has been split properly.
- 2 The right way**
The right way is hot and bright.
- 3 In the right appliance**
The right appliance is an EPA-approved appliance, inspected annually by a certified chimney sweep.

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www.epa.gov/burnwise

CERTIFIED CHIMNEY SWEEP
www.csia.org

EPA
United States Environmental Protection Agency



Wood-Burning Season Is Here!
Have you scheduled your annual inspection?

An estimated 25 percent of home heating fires are caused primarily by creosote buildup in the chimney.* Make your home healthier, safer, and more cost effective. A properly installed and maintained appliance burns more efficiently and saves you money. Contact your local certified chimney sweep to schedule an annual inspection today.

*Source: National Fire Protection Association

<https://www.epa.gov/burnwise/burn-wise-other-materials>

Wood Smoke and Your Health Poster

- Covers the lung and heart impacts of wood smoke and ways to reduce it.
- Not available as poster (yet).



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WOOD SMOKE AND YOUR HEALTH

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.

DID YOU KNOW?
One old, inefficient wood stove can pollute as much as 5 dirty old diesel trucks.

Tiny particles in wood smoke can affect your health

HEART IMPACTS
Increases the risk of heart attack, respiratory disease, heart failure, stroke and other events.

LUNG IMPACTS
Irritates and inflames the lungs 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 seasoned.
2. Use a certified wood-burning stove with a moisture meter (20% or below is best).
3. Use a clean-burning gas or wood stove.
4. Preheat chimneys or pipes before never let it smolder.

Learn more at www.epa.gov/burnwise



Asthma and Wood Smoke Videos

Overview

- Highlight the health effects (e.g., asthma) related to particulate matter (PM) exposure from residential wood smoke



Videos

- Wood Smoke and Asthma: Breathe Easier
<http://www.youtube.com/watch?v=sJQ4IVDDA6Q>
- Wood Smoke and Asthma: Reduce Smoke
<http://www.youtube.com/watch?v=aXj9j3g7EM>
- Wood Smoke and Asthma: Dry Firewood
<http://www.youtube.com/watch?v=Z-OfbPjXPUU>

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

Partnerships and Innovation Examples:

- Michigan Firewood Permit Program
- Washington State's Northwest Clean Air Agency "Learn Before You Burn" Poster
- Washington State's Northwest Clean Air Agency Firewood Shed Construction
- Alaska Department of Environmental Conservation: "Burn Wise, Breathe Easy"

Michigan Dept. of Natural Resources: Firewood Collection Permit



Michigan Department of Natural Resources – Forest Resources Division

PERSONAL USE FUELWOOD APPLICATION

Issued by authority of Part 5, 1994 PA 451, as amended. Noncompliance with the provisions of this act may result in revocation of this permit.

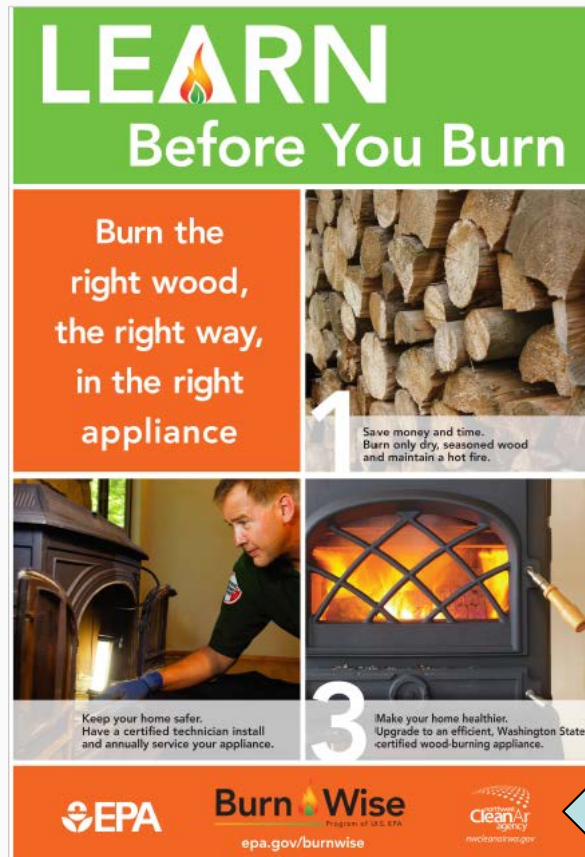
DNR USE ONLY PERMIT NUMBER	
GENERAL <input type="checkbox"/>	SPECIFIC <input type="checkbox"/>

This form is the application for personal use fuelwood. After approval, it will be attached to a Personal Use Fuelwood Permit and Receipt (PR4166). A permit is required to remove timber and must be in your possession when removing fuelwood from State land.

APPLICANT INFORMATION			
Name of Applicant / Permittee		Mailing Address	
Telephone ()		City, State, ZIP	
Location of Permit Requested		MI Driver's License or MI ID Number	Date of Birth
County		Vehicle Information	
Township(s)		Make/Model	
Map ID:		License/State	
LIABILITY AND INDEMNIFICATION			
<p>LIABILITY. Permittee hereby releases, waives, discharges, and covenants not to sue the State of Michigan, its departments, officers,</p>			



Washington State, Columbia Valley Clean Air Committee: “Learn Before You Burn”



Poster modified to include local air quality district's logo

Alaska Department of Environmental Conservation: Burn Wise, Breathe Easy



The screenshot shows the website for the Alaska Department of Environmental Conservation, Division of Air Quality. The header includes the state logo and navigation links for DEC and State of Alaska. A search bar is present. The main navigation menu includes: BURN WISE ALASKA, FAIRBANKS PM2.5, OPEN BURN, REGISTERED WOOD SELLERS, and AIR QUALITY HOME. Below the menu, a breadcrumb trail reads "You Are Here: DEC / Air / Burnwise Alaska". The main content area features three items: 1) A graphic with the text "BURN THE RIGHT WOOD, THE RIGHT WAY, IN THE RIGHT STOVE." and "BURNWISE.ALASKA.GOV" next to an axe and a log. 2) A circular logo with a flame in the center and the text "BURN WISE BREATHE EASY". 3) A video player titled "Wood-Burning Video" showing a wood stove with the text "By following a few simple steps..." and a small DEC logo in the corner.

WA State Northwest Clean Air Agency Supports Firewood Shed Construction and Distribution



How to Apply the Burn Wise Messages

- 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
- Make printed educational materials available at all your outreach events
- Conduct educational campaign in conjunction with all wood burning appliance replacement programs

Questions? Contact Ellen Wildermann
Wildermann.ellen@epa.gov or 919-541-5408.

To order educational materials, order online at
www.epa.gov/burnwise/orderform or email
burnwise@epa.gov.