



# The Great American Wood Stove Changeout Program



## Background:

EPA is partnered with the Hearth, Patio & Barbecue Association, the American Lung Association and others to help local agencies replace inefficient wood stoves and retrofit fireplaces with cleaner-burning technologies like gas, wood pellet, and EPA-certified wood stoves. This partnership program is called "The Great American Wood Stove Changeout". It can effectively reduce fine particle (PM<sub>2.5</sub>) pollution and air toxics and help bring areas into attainment with the national PM<sub>2.5</sub> standard. Residential wood burning in the U.S. emits 420,000 tons of PM<sub>2.5</sub> pollution each year.

## Benefits of Replacing Inefficient Wood Stoves:

- Reduces fine particles and toxic air pollution by 70%
- Reduces indoor PM<sub>2.5</sub> emissions by 55 % - 70% according to U. Montana
- Improves energy efficiency by 50%, using 1/3 less wood
- Climate change benefits (reduction in methane, black carbon and CO<sub>2</sub>) from improved combustion efficiency and use of less fuel wood
- Changing out 25 inefficient wood stoves will result in reducing 1 ton of fine particles/year
- To date, over 13,000 wood stoves and fireplaces changed out in more than 45 communities, approximately 248 tons of PM reduced/year, & an estimated \$84 million/year of health benefits
- Replacing all 9 million old, dirty stoves in the U.S. would reap \$35 billion in health benefits each year

- Changing out 1 inefficient wood stove is equivalent to the PM<sub>2.5</sub> emission reductions of taking 5 diesel buses off the road

## Major Wood Stove and Fireplace Changeout Events 2005-2009:

### Lincoln County/Libby, Montana

- Replaced 1100 wood stoves
- \$1 Million donated by industry, \$100K from EPA, \$50K state
- Data shows significant improvement in outdoor air quality & 70% PM 2.5 improvement indoors

### Sacramento, California

- To date has replaced more than 3,200 old wood stoves and dirty fireplaces
- Provided incentive funds of up to \$3,500/homeowner, total funding is \$1.5 million
- Hearth industry has provided additional discounts

### Michigan

- Replaced more than 500 wood stoves
- \$100K EPA grant and \$100K from state pollution prevention program
- Up to \$600 cash incentives, included \$100 - \$300 discounts from industry

EPA has invested \$1,200,000 in wood stove changeouts in recent years, while individual homeowners and our public & private partners have invested nearly \$13 million.

### **Additional Locations Participating in Changeouts/Fireplace Retrofits 2005-2009:**

- Yolo-Solano, CA\*
- Butte County, CA\*
- Placer County, CA\*
- Bay Area, CA\*
- Shasta Co., CA
- San Joaquin, CA\*
- Yolo Sololano, CA\*
- Delta County, CO
- Preston, ID\*
- Pinehurst, ID\*
- Nez Perce Tribe, ID
- Ravalli, Gallatin Co., MT\*
- Keene, NH\*
- Questa, NM
- Washoe County, NV\*
- Washington Co., OH \*
- Klamath Fall, OR\*
- Oakridge, OR\*
- Pendleton, OR\*
- SW Pennsylvania\*
- Christiansburg, VA
- State of VT
- Oneida Tribe, WI
- Darrington, WA\*
- Ferry and Steven Co., WA\*
- Lummi Tribe, WA
- Marysville, WA\*
- Tacoma, WA\*
- Pend Oriella Co., WA
- WA Spokane, WA\*
- Swinomish Tribe, WA
- Yakima, WA \*
- Whatcom/Island Co., WA
- Sublette Co., WY

\*Areas facing annual and/or daily PM 2.5 non-attainment challenges.

**Supplemental Environmental Projects (SEP) and Mitigation Projects:** \$2,070,000 in funds negotiated to pay for clean stoves:

- 2 in Ohio: Dayton \$75K, Washington Co., \$245K
- 8 in WA State: 6 in Bellingham area, 2 in Spokane \$530K, 1 in Butte Co., CA 75K, 1 in El Dorado Co., CA \$55K
- 1 in NM: Questa \$100K, 1 in VA: Christiansburg \$45K, 1 in AZ: St. Johns \$750K

Results: 492 stoves replaced with SEP funds provided over \$5 M in annual health benefits

### **Tools Available for States/Local/Tribes:**

- Strategies for Residential Reducing Wood Smoke Resource Guide
- EPA Wood Stove and Fireplace Cleaner Burning Website ([www.epa.gov/burnwise](http://www.epa.gov/burnwise))
- Wood Stove Changeout “How to Guide” and example outreach materials
- Wood Stove Changeout Emissions Credit Guidance for State Implementation Plans
- “Burn Wise” fact sheet and brochure that focuses on tips for the public
- Case Studies
- Potential funding options for changeouts

### **Feedback/Additional Information:**

Contact Larry Brockman, [brockman.larry@epa.gov](mailto:brockman.larry@epa.gov), 919-541-5398 with comments, questions or suggestions. For more information go to [www.epa.gov/burnwise](http://www.epa.gov/burnwise).

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