

# Woodstove Changeout Program

Libby, Montana

2005 – 2007



Early in 2005, the EPA, HPBA, Montana Department of Environmental Quality and Lincoln County recognized the need and the opportunity to provide the community of Libby, Montana with the means to identify and correct the environmental and health concerns related to the community's status of non-attainment of the EPA PM<sub>2.5</sub> standards. The following presentation outlines our program to assist the community.



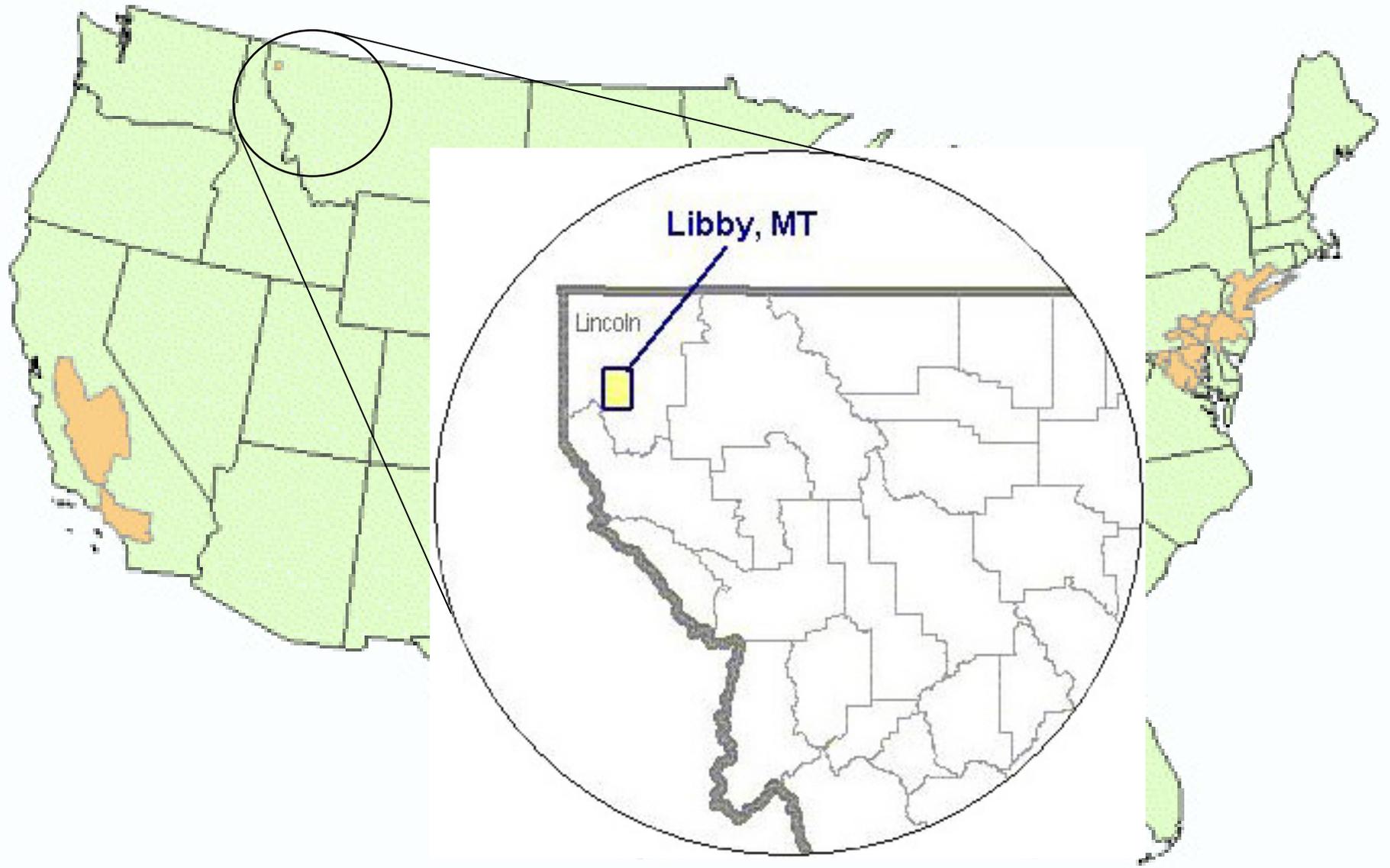
# THE SETTING

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Libby, Montana

- Location
- Topography
- Demographics

**LOCATION**



# TOPOGRAPHY





# DEMOGRAPHICS

# THE PROBLEM AND CHALLENGES

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- Topography
- Economy
- Air Quality History
- Abundance of Wood/Forest Access
- Impaired Respiratory Population
- Outreach

# TOPOGRAPHY





**ECONOMY**

# Average Unemployment Rate in Lincoln County

(Source: Montana State Dept. of Labor & Industry)

| Year | Rate   |
|------|--------|
| 1990 | 12.27% |
| 2001 | 11.24% |
| 2002 | 13.53% |
| 2003 | 15.47% |

Historically, Lincoln County's unemployment rate is one of the highest in the state. According to the 2000 U.S. Census, 19.2% of Lincoln County residents are below the poverty level.

# AIR QUALITY HISTORY



# ABUNDANCE OF FIREWOOD









# IMPAIRED RESPIRATORY POPULATION



Center for Asbestos Related Disease



Libby Research Center  
293-9274 214 E 3rd

**OUTREACH**

# THE PROGRAM AND SOLUTIONS

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Address three goals:

1. Reduce PM<sub>2.5</sub> emissions
2. Assist health of community citizens
3. Provide a model for woodstove changeout programs

# Lincoln County implemented the program in three phases:

**Phase 1:** Changeout of wood heating appliances in low-income households (2005-2006), with approximately 300 units to be replaced by June 2006.

**Phase 2:** Changeout of appliances in remaining households and businesses (2006), with approximately 900 units to be replaced in the target area. A stove rebuild/catalytic unit replacement program will be used to rebuild or refit up to 100 existing certified stoves that are still useable, but are not operating properly due to their condition.

**Phase 3:** Gather data on the air quality effects of the program through continued monitoring and data analysis and prepare a final report. Promote proper stove use through education, in order to maximize effectiveness of woodstove changeout program.

# THE PROGRAM

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## Phase 1

- ✓ Objective
- ✓ Targeted Population
- ✓ Program Outline:
  - Application/Eligibility
  - Site Inspection/Stove Assignment
  - Installation
  - Inspection
  - Old Stove Disposal
  - Dealer Payment
  - Documentation

**OBJECTIVE**

**TARGETED POPULATION**

# Phase 1

## Woodstove Changeout Program

### Income Guidelines

| Number in Household | Annual Income |
|---------------------|---------------|
| 1                   | \$17,456.00   |
| 2                   | \$23,419.00   |
| 3                   | \$29,381.00   |
| 4                   | \$35,344.00   |
| 5                   | \$41,306.00   |
| 6                   | \$47,269.00   |



# PROGRAM OUTLINE

# Media Event











**HPBA**  
Hearth, Patio & Barbecue Association  
1801 N. Reno Street  
Suite 1001  
Arlington, VA 22209

3225  
12-3450/7890

PAY TO THE ORDER OF Lincoln County Woodstove Changeout DATE 6/16/05

One Million Dollars <sup>00/100</sup> \$ **1,000,000** DOLLARS

MEMO \_\_\_\_\_

Carter Keithley

**APPLICATION/ELIGIBILITY  
&  
SITE INSPECTION/  
STOVE ASSIGNMENT**

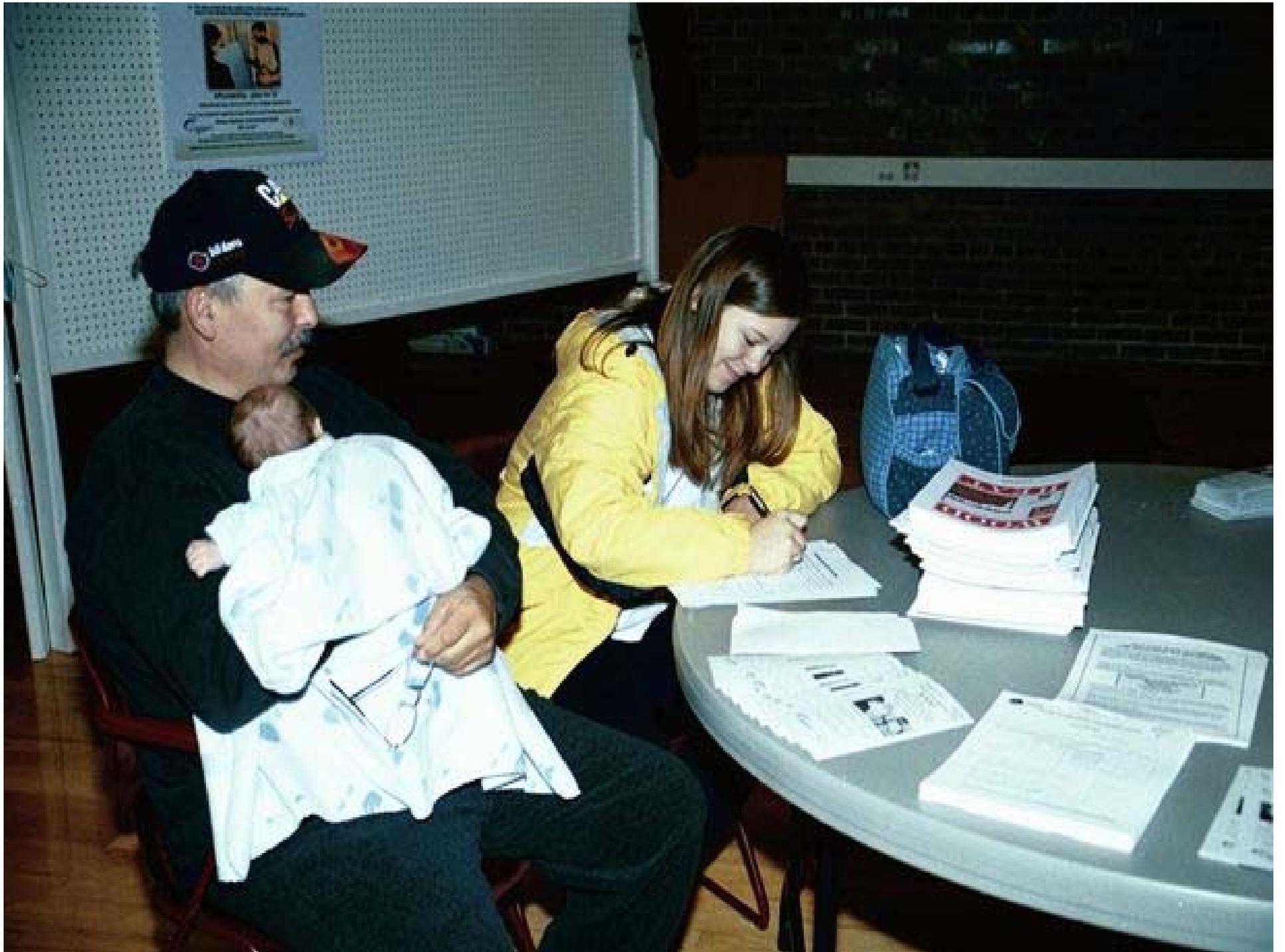
# Stove Fair - Phase 1











*Lincoln County Woodstove Changeout Program*  
418 Mineral Ave, Libby, MT 59923 ~ (406)293-7781 ext 228

**PHASE I**  
**APPLICATION FOR LOW INCOME HOUSEHOLDS**

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**Please Print Clearly** **Date** \_\_\_\_\_

**Name** \_\_\_\_\_

**Home Address** \_\_\_\_\_

**Mailing Address** \_\_\_\_\_

**Phone: Home** \_\_\_\_\_ **Work** \_\_\_\_\_ **Other** \_\_\_\_\_

**Proof of Eligibility** \_\_\_\_\_

**What would be the best time to contact you?** \_\_\_\_\_

**Do you** \_\_\_\_\_ **Own** \_\_\_\_\_ **Rent** \_\_\_\_\_

**Average wood usage per year** \_\_\_\_\_  **cords**

**Approximate square feet of home** \_\_\_\_\_

\_\_\_\_\_

**Signature**

**Return completed application to drop box in Lincoln County Annex lobby or mail to above address.**

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*For Official Use Only*

**Inspection Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**New Construction** \_\_\_\_\_ **Existing** \_\_\_\_\_ **Remodel** \_\_\_\_\_ **Manufactured Home** \_\_\_\_\_

**Framing:** 2x4 2x6 Block Single / Multi Story

**Siding:** Wood Vinyl Stone Stucco Brick Other \_\_\_\_\_

**Floor to box/ceiling** \_\_\_\_\_ **Roof Pitch** \_\_\_\_\_ **Roof Type** \_\_\_\_\_

**Insulation Type:** Batt Blown R Value \_\_\_\_\_ **Window Type** \_\_\_\_\_

**Square footage of heated area** \_\_\_\_\_ **sq. ft.** **Ceiling Fan** \_\_\_\_\_

**Ceiling Pitch** \_\_\_\_\_ **Propane supply to house** \_\_\_\_\_

**Crawl Space** \_\_\_\_\_ **Ease of access** \_\_\_\_\_

**Floor protector size** \_\_\_\_\_ **Corner / parallel**

INSTALLATION  
&  
INSPECTION



# INSPECTION FORM

INSPECTOR \_\_\_\_\_

COMMENTS:

Customer \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone (H) \_\_\_\_\_ (W) \_\_\_\_\_

Date \_\_\_\_\_ Time \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Circle appropriate item:

Stove FS Insert

MAKE \_\_\_\_\_

MODEL \_\_\_\_\_

Serial # \_\_\_\_\_

Other \_\_\_\_\_

Time & Date Scheduled \_\_\_\_\_

WOODSTOVE OR FIREPLACE INSERT:

Stove Pipe Condition (woodstove) \_\_\_\_\_

NFPA Approved Flute Connection \_\_\_\_\_

Installation/Thimble/Clearances \_\_\_\_\_

Other Safety Considerations \_\_\_\_\_

Fire Ext./Smoke Detectors/CO Alarms \_\_\_\_\_

Fire Escape Plan \_\_\_\_\_

Additional Comments & Drawings:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# TRAINING AND SURVEY

Name \_\_\_\_\_ Phone \_\_\_\_\_

Inspection Date \_\_\_\_\_ Time \_\_\_\_\_

Installer \_\_\_\_\_ Installation Date \_\_\_\_\_

Stove Model \_\_\_\_\_

## SURVEY

Satisfaction of program \_\_\_\_\_

\_\_\_\_\_

Quality of installation \_\_\_\_\_

\_\_\_\_\_

Comments \_\_\_\_\_

\_\_\_\_\_

## TRAINING

Stove operation \_\_\_\_\_

Proper fuel and handling \_\_\_\_\_

Stove maintenance \_\_\_\_\_

# OLD STOVE DISPOSAL



**DEALER PAYMENT  
&  
DOCUMENTATION**

# THE PROGRAM

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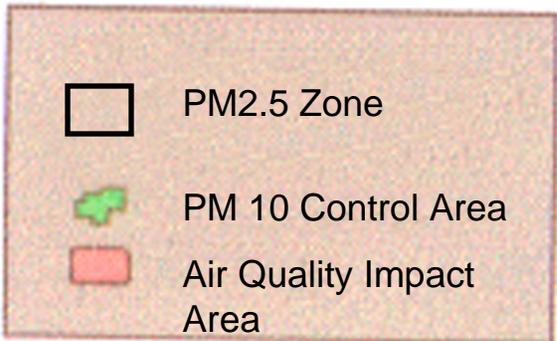
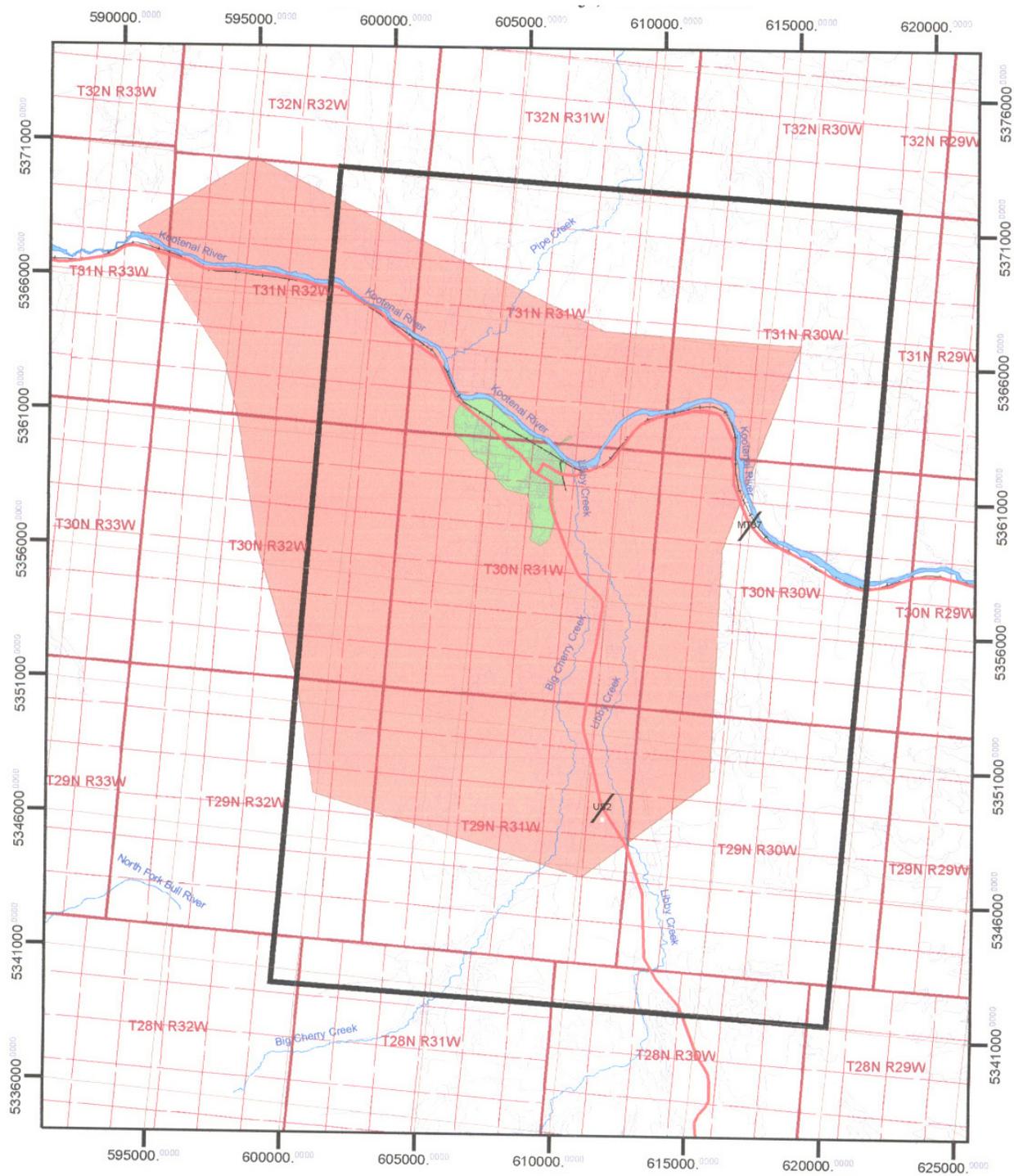
## Phase 2

- ✓ Objective
- ✓ Targeted Population
- ✓ Program Outline:
  - Application
  - Site Inspection
  - Voucher Issue
  - Installation
  - Old Stove Disposal
  - Dealer Payment
  - Documentation

**OBJECTIVE**

**TARGETED POPULATION**

# Air Quality Control District



# PROGRAM OUTLINE

# Stove Fair - Phase 2











GLASS & HOME  
INNOVATIONS

Local  
Sales,  
Service  
& Install



HAMPTON  
FIREPLACE & HEARTH





**\$500**

**Montana Energy  
Conservation Tax Credit**



APPLICATION  
&  
SITE INSPECTION

*Lincoln County Woodstove Changeout Program*  
418 Mineral Ave, Libby, MT 59923 ~ (406)293-7781 ext 228

**PHASE II**  
**VOUCHER APPLICATION**

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*Please Print Clearly*

Date \_\_\_\_\_

Name \_\_\_\_\_

Home Address \_\_\_\_\_

Mailing Address \_\_\_\_\_

Phone: Home \_\_\_\_\_ Work \_\_\_\_\_ Other \_\_\_\_\_

What would be the best time to contact you? \_\_\_\_\_

Do you \_\_\_\_\_ Own \_\_\_\_\_ Rent \_\_\_\_\_

Average wood usage per year \_\_\_\_\_ cords

Approximate square feet of home \_\_\_\_\_

\_\_\_\_\_  
Signature

***Return completed application to drop box in Lincoln County Annex lobby or mail to above address.***

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*For Official Use Only*

Inspection Date: \_\_\_\_\_ Time: \_\_\_\_\_

Chimney: Masonry Interior / Exterior Condition: \_\_\_\_\_

Class A Interior / Exterior Condition: \_\_\_\_\_

Existing appliance: Fireplace Woodstove Furnace Insert

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# VOUCHER ISSUE

**VOUCHER**

***Lincoln County Woodstove Changeout Program***

*418 Mineral Ave, Libby, MT 59923 ~ (406)293-7781 ext 228*

Issue Date: February 14, 2006

This certificate is issued to: John Sample  
123 Made Up Blvd  
Libby, MT

This certificate is non-transferrable.

- X This certificate is redeemable for \$700.00 toward the purchase of an approved heating appliance (wood, gas, pellet, oil or electric of at least \$700.00 retail value) from a participating authorized heating appliance dealer. (See below)
  
- X This certificate is redeemable for \$350.00 toward the installation of an approved heating appliance by an NFI certified installer. If the cost of installation is less than \$350.00, the difference will be applied toward the appliance purchase.
  
- X This certificate is redeemable for the \$100.00 Early Application Incentive to be applied toward the purchase of an approved heating appliance.

Participating authorized heating appliance dealers:

- Alpine Heating, LLC - Libby
- Amerigas Propane - Libby
- Anderson Masonry - Kalispell (Woodstoves Only)
- City Service Valcon - Libby
- Energy Partners - Thompson Falls
- Glass & Home Innovations - Libby
- Hoodoo Mountain Inc. - Libby
- Larson Lumber - Troy
- Moore Oil - Libby
- Mountain Spa & Stove - Sandpoint, ID
- Northern Energy - Libby
- Olson Heating Service - Libby
- Rick's Rental/Schrader Stoves - Libby
- Roeder Heating - Troy
- Ziegler Building Center - Kalispell (Woodstoves Only)

Independent certified installer:

- Tom Kurle - Libby
- Gary Huntsberger - Libby

Authorized by: \_\_\_\_\_

Activation Date: February 24, 2006

Expiration Date: November 1, 2006

Verification Code: WSCII009

## Voucher values will be:

|    |  |           |
|----|--|-----------|
| 1. | Approved heating appliance (certified wood, pellet, gas, oil, electric) of at least \$700 retail value | \$700.00  |
| 2. | Installation of approved heating appliance by certified dealer or independent installer                | \$350.00  |
| 3. | Removal of stove and decommissioning of wood burning capability  | \$200.00  |
| 4. | Early application incentive  | \$100.00  |
| 5. | Furnace replacement or upgrade with pellet, oil, certified wood, or gas furnace                        | \$1400.00 |

# INSTALLATION





# OLD STOVE DISPOSAL



DEALER PAYMENT  
&  
DOCUMENTATION

# THE PROGRAM

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## Phase 3

- ✓ Objective
- ✓ Program Outline:
  - Air Sampling
  - Budget Administration
  - Final Report
  - Community Education

**OBJECTIVE**

# PROGRAM OUTLINE

# AIR SAMPLING



# BUDGET ADMINISTRATION

### Phase 1 - Operating Budget

|   |           |
|---|-----------|
| Salary and Fringe – Program Coordinator | \$55,820  |
| Office Supplies                         | \$1,500   |
| Operating Expenses                      | \$4,000   |
| Utility Service                         | \$3,000   |
| Travel                                  | \$3,500   |
| Purchased Services                      | \$244,704 |
| Total                                   | \$312,524 |

### Phase 2 - Operating Budget

|  |           |
|--|-----------|
| Salary and Fringe – Program Coordinator      | \$50,000  |
| Supplies, Utility Service                    | \$2,950   |
| Travel                                       | \$3,000   |
| Purchased Services                           |           |
| Vouchers – 900 changeouts                    | \$916,000 |
| Certified Stove Rebuild Program – 100 stoves | \$33,250  |
| Total  | \$985,200 |

## PROGRAM FUNDING

| Source   | 2005                                       |        |          |         | 2006-2007  | TOTAL              |
|--|--|--------|----------|---------|------------|--------------------|
| <b>PHASE I</b>   |  |        |          |         |            |                    |
|  | June 1                                     | July 1 | August 1 | Sept 1  |            |                    |
| HPBA   | 25,000                                     | 40,000 | 60,000   | 40,000  |            | \$165,000          |
| EPA  |  |        |          | 100,000 |            | \$100,000          |
| MT DEQ*  | 5,820                                      | 50,000 |          |         |            | \$55,820           |
| LINCOLN COUNTY   | In-Kind, Ongoing                           |        |          |         |            | \$144,700          |
| EPA 105 \$   | Prior Commitments for Monitoring Equipment |        |          |         |            | \$99,210           |
| EPA C.A. GRANT   |  |        |          | 100,000 |            | \$100,000          |
| <b>PHASE I (Low Income Changeout) TOTAL</b>            |  |        |          |         |            | <b>\$1,014,730</b> |
| <b>PHASE II (Pending Requests Only, Not Confirmed)</b> |  |        |          |         |            |                    |
| Congressional Request                                  |  |        |          |         | \$ 985,200 | \$ 985,200         |
| Homeowner Share  |  |        |          |         |            | TBD                |
| MT DEQ   |  |        |          |         | \$ 50,000  | \$ 50,000          |
| <b>PHASE II TOTAL</b>                                  |  |        |          |         |            | <b>\$1,035,200</b> |
| <b>PROGRAM TOTAL</b>                                   |  |        |          |         |            | <b>\$2,049,930</b> |

# FINAL REPORT

# COMMUNITY EDUCATION

cue; LCSO, Lincoln County Sheriff's Office; MHP, Montana Highway Patrol.

Sheriff Daryl Anderson

12:52 p.m. — LVA responded to a report of a one-vehicle accident on U.S. Highway 2 near mile marker 20.

Saturday, Feb. 25

Creek Road near the county landfill.

10:55 a.m. — LVA responded to a report of a boy at Asa Wood Elementary who was having trouble breathing.

## Clearing the Air

### Answers to your questions about the Woodstove Changeout Program

**Q:** Do I have to replace my stove? And how long do I have?

**A:** Yes. If you currently use an uncertified woodstove and you plan to continue to heat your home with wood, you must replace it with an EPA certified stove. You can also replace it with an approved gas, pellet, oil or electric appliance. EPA has designated the Libby area as nonattainment for the new PM2.5 air standard. Lincoln County and the City of Libby are adopting revised Air Quality Control Regulations to achieve compliance with this health-based standard. The regulations prohibit the use of any uncertified wood burning appliance (including fireplaces, furnaces and shop stoves) after January 1, 2007.

**Q:** What are "Phase 1" and "Phase 2" all about?

**A:** Phase 1 of the Woodstove Changeout Program started in June 2005. Installation monies, chimneys, and 300 woodstoves were donated by HPBA (the stove industry association) for stove replacements in low income households in the immediate Libby area. Phase 1 is income-based, and will continue until the donated equipment is allocated. Phase 2 began in January 2006 and is not income-based. This phase involves a voucher system which assists homeowners needing replacements with the purchase and installation of new heating appliances. Phase 2 targets 900 woodstoves, fireplaces and furnaces. For both phases, application to the program is required and uncertified stoves must be turned in to the program to be destroyed.

Applications are available at the Lincoln County Annex, 418 Mineral Avenue. Call the Woodstove Changeout Program at 293-7781 ext 228 for more information.

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spayed or neutered will be asked for a \$10 contribution, although no one will be turned away. The event costs more than \$5,000 to put on, and contributions will help defray the costs.

## Job Fair scheduled Thursday, March 2

Local employers are encouraged to participate in the annual Community Job Fair, which will be Thursday, March 2, at the Lincoln County Campus of Flathead Valley Community College.

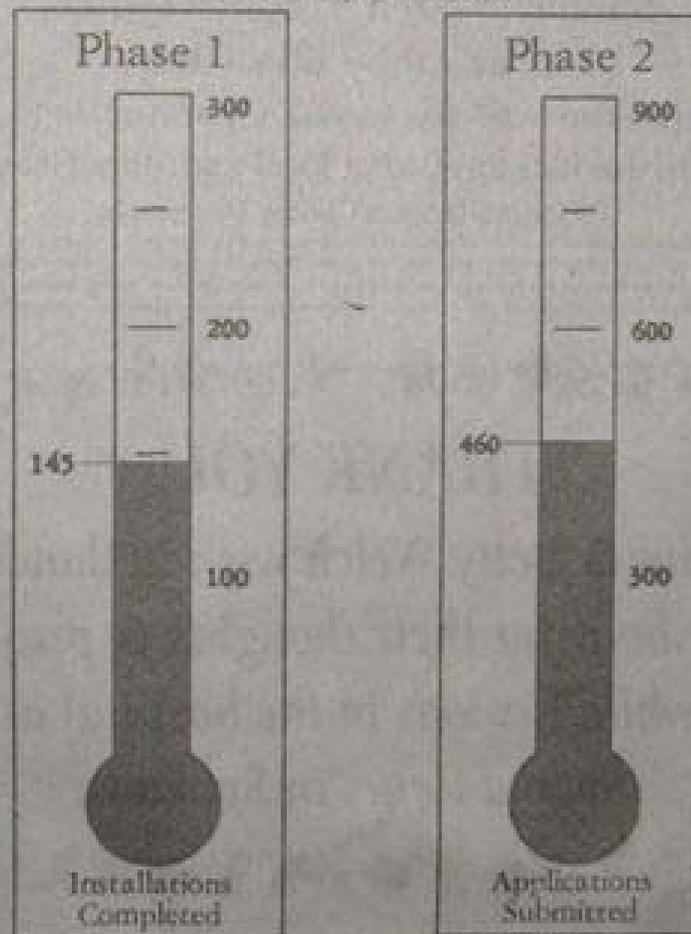
Tables and chairs will be provided for employers. Other needs, such as electrical access, extension cords or special sized tables should be communicated in advance. For more information, contact Johnette at 293-6282, Ext. 226 or Kari Martell at 293-6282, Ext. 227.

mal control department killed 1,049 animals. By last year, the number had fallen to 226.

"We are working for the

an appointment may call animal control at 293-4040 during working hours. The office is closed Monday but open on Saturday.

### Libby Woodstove Changeout Progress Report -February 24, 2006-



# MARCH

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# oving ahead

laced, how going smoothly, Marquez said.



Lincoln County  
**Woodstove Changeout Program**  
**BURN SMART FAIR**



Dear Woodstove Owner,



Thank you for taking part in the Lincoln County Woodstove Changeout Program. We hope that you are enjoying your new, clean burning woodstove. The advanced technology in your EPA certified woodstove burns the smoke before it leaves the firebox, extracting more of the energy in the wood and resulting in higher efficiency and less air pollution in our neighborhoods.



To help you get the most out of your new woodstove, we have invited HPBA representatives and stove expert, Ben Myren to Libby for a community event:

Lincoln County Burn Smart Fair  
 Thursday, October 27, 2005  
 5:30 pm - 7:30 pm  
 City (Legion) Ball Park at 2nd & California



EPA certified wood stoves will be set up and burning as our panel of experts discuss:



- ◆ How to get the maximum heat and efficiency from your stove
- ◆ Firewood selection, collection & storage
- ◆ The most efficient way to start a fire
- ◆ How to check your chimney for creosote build-up
- ◆ Care and maintenance of your new appliance



There will be time for your questions after the presentation.



Bring the enclosed coupon to the Burn Smart Fair to receive your FREE stovepipe thermometer and Duraflame firestart kit.

We hope to see you there!



# THE OUTCOME

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- Overall success will be determined by the reduction in  $PM_{2.5}$  emissions in the Libby non-attainment area
- Provides a useable template for other changeout programs
- Provides a cost-benefit ratio for changeout program planning
- Woodstove changeout, local air control regulation, and the anticipated  $PM_{2.5}$  emission reduction will be the king pin in the Libby  $PM_{2.5}$  SIP.

## Program summation as of February 28, 2006

Phase 1:       145   Changeout installations completed  
                  15    Tons of metal recycled

Phase 2:       460   Program applications received  
                  143    Vouchers issued

# CONCLUSIONS

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- Community Health - Use of certified stoves will promote emission reduction and will improve respiratory comfort both inside homes and outside.
- Financial incentives are essential in encouraging acceptance and participation in a woodstove changeout program.
- Improved air quality through emission reduction is necessary to create a more attractive environment, which in turn is necessary to attract new growth and economic development.
- Air quality improvement, through pollution prevention, must promote voluntary participation, but must have enforcement tools for support.
- Peer pressure is an important ally in promoting compliance.
- Unwavering political will is critical and required for a successful program.

# CLOSING

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The Libby, Montana Woodstove Changeout Program is a blue ribbon example of the public, local, state, and federal governments, and private industry working as a team to accomplish a common goal. Everyone is a stakeholder and everyone wins!

