

**The Seeley Lake Woodstove Changeout
Program: A model for effective community
and government participation, action,
and implementation.**

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**SEELEY LAKE
WOODSTOVE
CHANGEOUT**





SEELEY LAKE
EAGLES

SEELEY LAKE
Community Foundation
Banquet: 8/10 @ 4:30
Double Arrow Lodge



Introduction:

- Seeley Lake is a small, mountain valley community located northeast of Missoula in Missoula County, Montana
- Many residents rely on woodstoves to heat their homes
- The Seeley Lake valley is prone to frequent temperature inversions that trap smoke from wood stoves near the ground where it poses a threat to human health
- One day in three monitoring for $PM_{2.5}$ started in 2005. When daily standard changed to $35 \mu\text{g}/\text{m}^3$, needed to find a more permanent monitoring location.



2009-2010: Community Outreach and Investigations

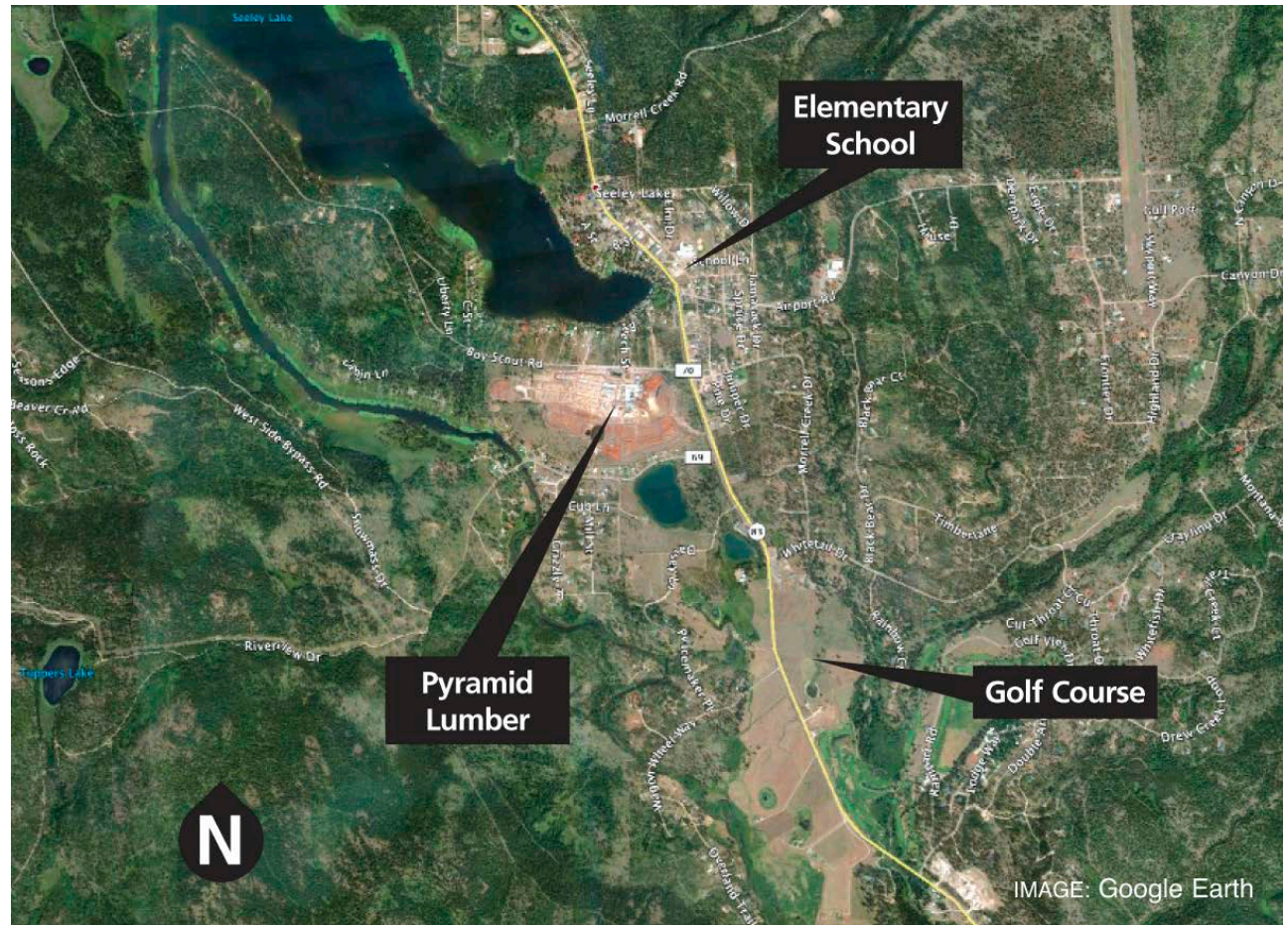
- **Open Houses and Rule Changes:** The Missoula City County Health Department held 3 open houses in Seeley Lake. Topics covered included how to burn cleanly, the proposed 2010 Missoula City-County Air Pollution Control Program rule changes for new woodstoves, and how the newer stoves need less wood each winter and burned cleaner.
- **Visual Smoke Assessments:** In addition to monitoring PM2.5 concentrations, MCCHD staff performed several visual smoke assessments in Seeley Lake during the winter of 2009-2010. They observed the thickest smoke in the neighborhoods immediately south and north of the elementary school. Smoke levels appeared less dense in other parts of the community.
- **100% Opacity:** Visual observations by MCCHD staff in Seeley Lake frequently found woodstove smoke opacity readings of 90-100%.

2010: Wood stove open houses - Community takes a leading role.

- **Fire Hall Open House:** Missoula City-County Health Department partners with community leaders, Community Council, vendors, Low Income Energy Assistance Program (LIEAP), and others to host a “woodstove open house” at the Fire Hall.
 - About 300 residents attended the Fire Hall open house, which included displays on how to burn cleanly, burning alternatives, new woodstove technology, information about inversions and air quality and health. **Thus began the foundation of Missoula County working with Seeley Lake on a wood- burning appliance changeout program.**
- **Pilot Wood Stove Changeout Program:** The groups then formed a plan, and start to build partnerships to proactively address the Seeley Lake community’s air quality. As a result, \$13,500 in funding was secured from the **Seeley Lake Community Foundation** to implement a small woodstove changeout and education pilot program.
 - Four open houses were conducted, five wood stoves changed out, 15 wood shelters built, a “tarp your wood” educational initiative plus information on how to burn wise, distributed. The implementation of the pilot program provided valuable experience to establish a greater program. Communication with the Seeley Lake Community Council continued through out these processes.

April 2010:

Visual
woodstove/
fireplace/
pellet stove
chimney
survey



*In a 16 square block residential neighborhood south of the elementary the survey identified **50 residences with chimneys** and **five residences with a second chimney** for a total of up to **55 chimneys in the survey area***

Winter 2010-11: PM2.5 Saturation Study performed

- PM2.5 monitors were set up in and around town to determine areas of concern and confirm the source of pollution
- The main source of PM2.5 ***was shown to be residential woodstove smoke***
- Monitoring at different sites indicated that the problem may not be valley wide, but rather a neighborhood scale problem. Air quality good in other parts of the valley away from the residential areas
- The problem was determined to be a manageable scale and efforts were focused on a few neighborhoods to reduce pollution volume and sources



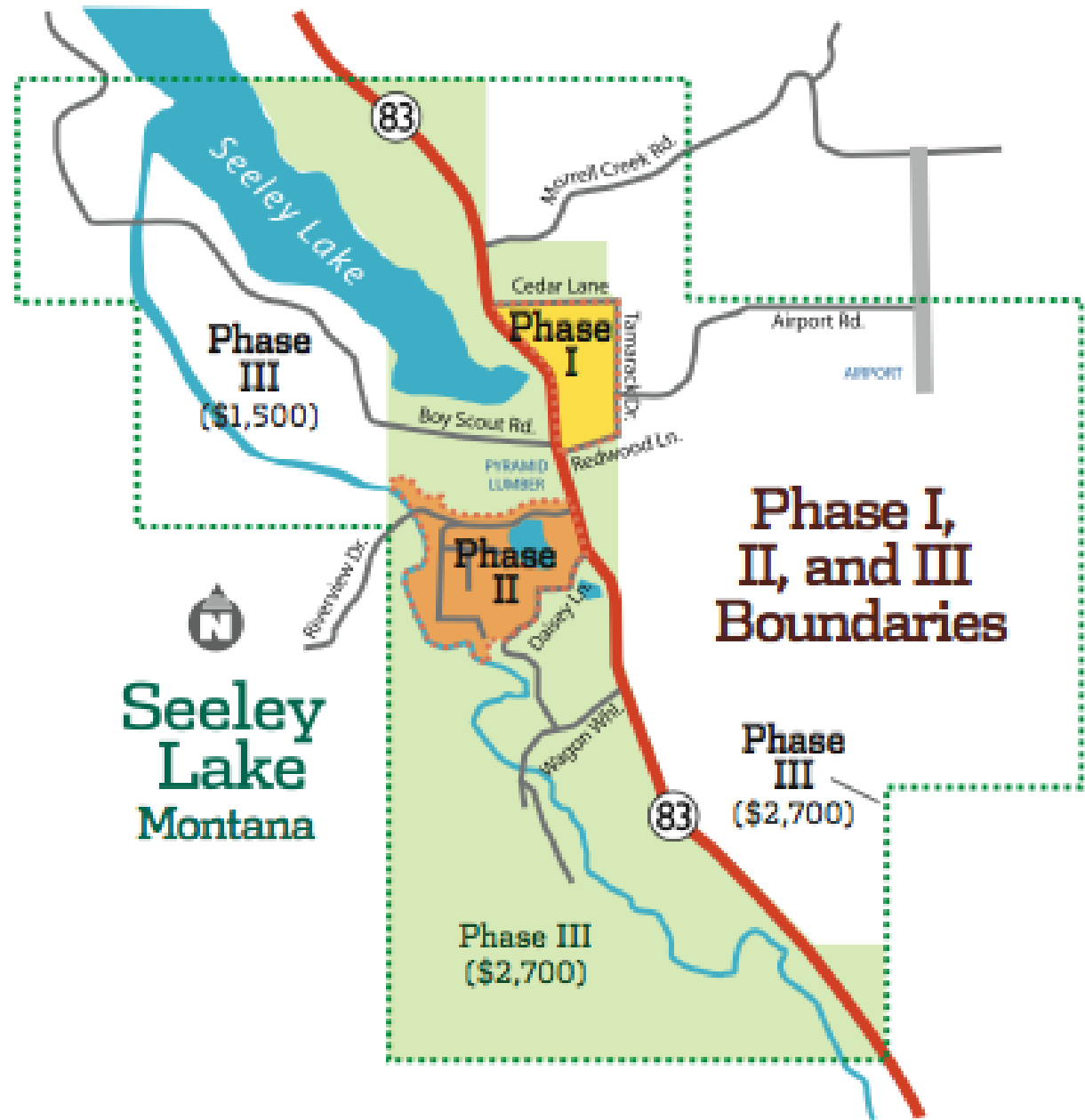
March 2012: Missoula City-County Health Department applies for a USDA/Glacierland Woodstove Changeout Grant

- In 2012 Missoula County, with help from several members of the Seeley Lake community, applied for and received the Glacierland woodstove changeout grant. Funds for the grant are provided through the USFS
- The success of that application was due in part to the earlier pilot program success



A phased in approach...

- In the spring of 2012 the changeout program moves into full swing. Vendors go door to door in Phase I (near the school) and Phase II (south of Pyramid Lumber) finding folks who want to participate.
- 60 stoves are replaced in Phase I, and ten stoves are replaced in Phases II and III by March 20, 2013.
- By 2014, 167 stoves were replaced in Phases I, II, and III.



April 2013: Matching money from the Roseburg SEP becomes available

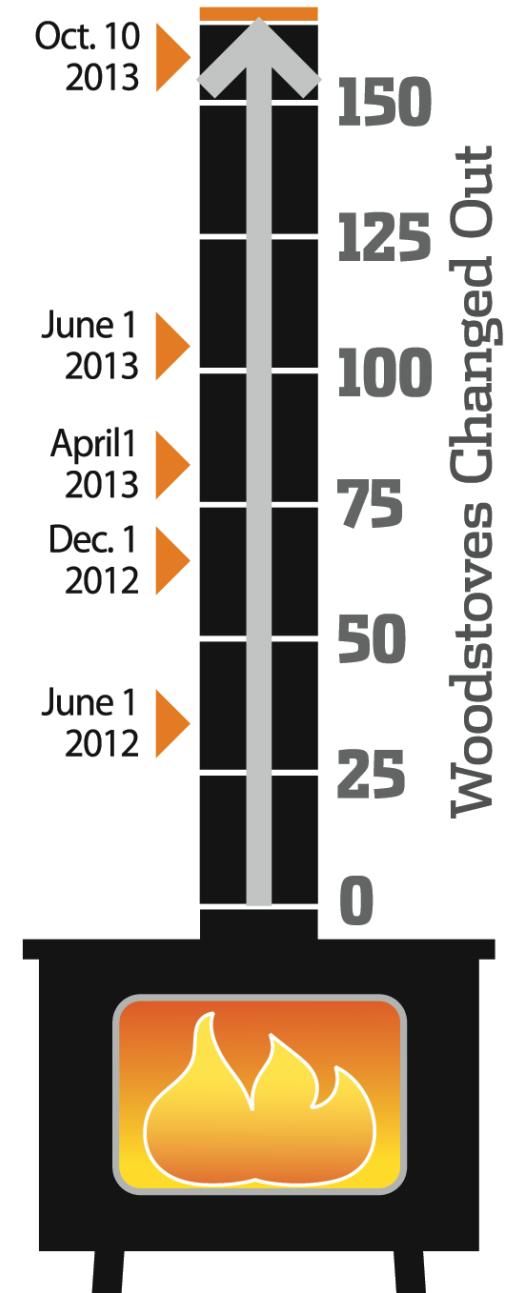
Instead of a cash penalty for violations of the Clean Air, Roseburg Forest Products agreed to pay \$130,925 to the Missoula County Seeley Lake Woodstove Changeout Program as a Supplemental Environmental Program. Because of the funds from Roseburg, \$2,700 became available per stove changeout to people in Phase I by the Elementary school, and Phase II south of Pyramid Mountain Lumber

July 2013: Steele-Reese Foundation provides an additional \$25,000 for wood stoves

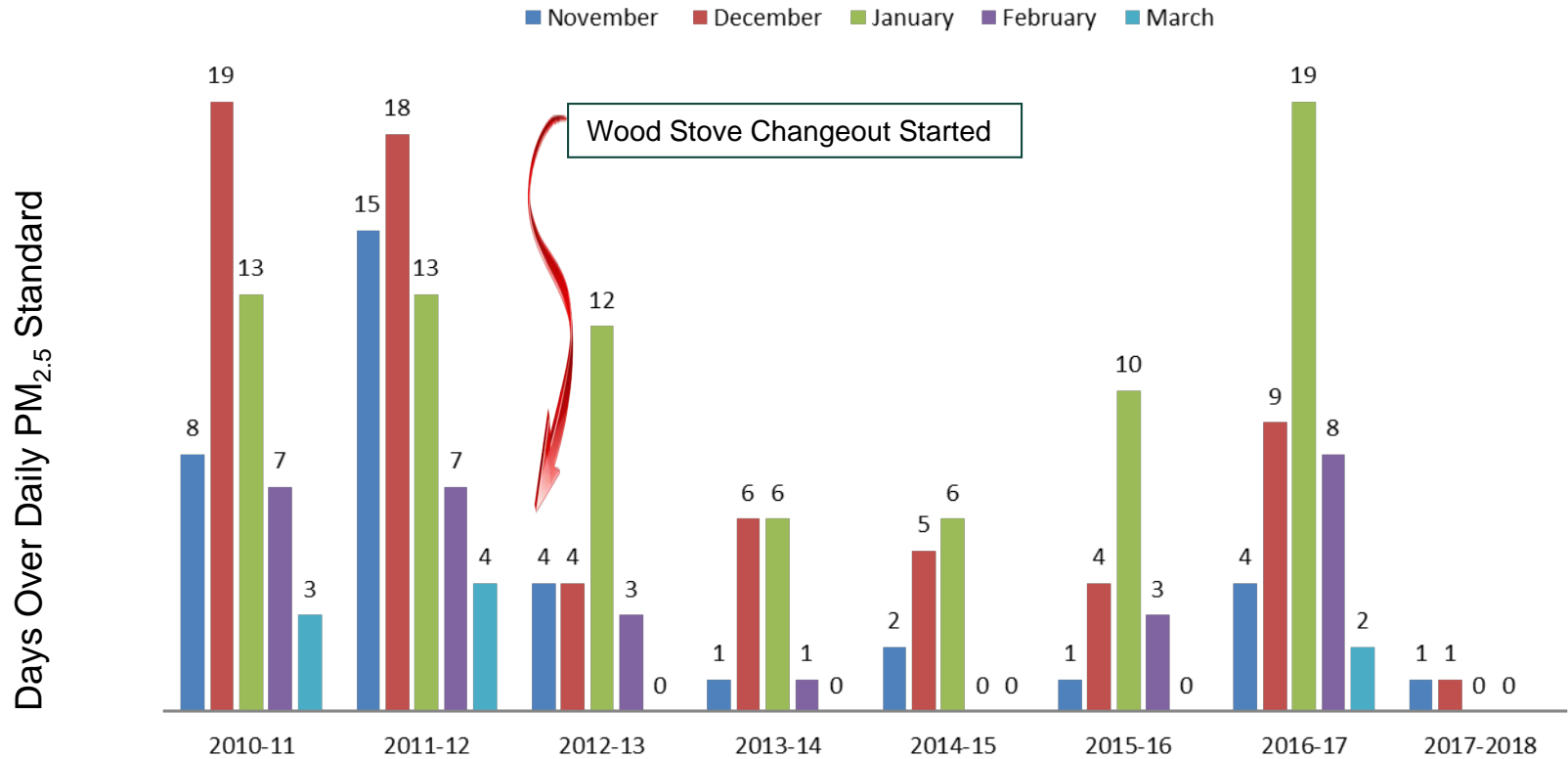
This grant from the Steele-Reese Foundation **allows the opening up all of Phase III for the full \$2,700** compensation per woodstove changeout, instead of \$1,500 per stove

Fall 2013: The Seeley Lake Woodstove Changeout Program meets its goal of 154 stoves replaced

By the end of September 2013, the Seeley Lake Woodstove Changeout Program met its stated goal of replacing at least 154 inefficient, non EPA-certified stoves two months ahead of schedule. By June of 2014, with funds remaining, an additional 13 stoves were approved, bringing the total to 167.



Seeley Lake Number of Days Over 35 $\mu\text{g}/\text{m}^3$ by Month



Strategies for a Successful Change Out Program

Seven Strategies

1. Control future installations
2. Prioritize which stoves are changed out
3. Focus on Wood
4. Right size the rebate, require partial payment
5. Require strict emission and efficiency standards
6. EPA certified devices only
7. Wood inspections with energy audits

Seeley Lake

1. Yes – County Rules (2010)
2. Yes – Phased in Approach
3. Yes – partially, need more emphasis
4. Yes and No – Frequently did not require partial payment
5. Yes – 3 grams/hour
6. Yes
7. No – But can be part of Montana LIEAP Program





The Seeley Lake Woodstove Changeout Program is funded in part by the U.S. Forest Service, Department of Agriculture and is administered in partnership with **Glacierland Resource Conservation and Development, Inc.** Additional assistance provided by the Environmental Protection Agency. Additional funding and/or assistance provided by the Seeley Lake Community Foundation, Seeley Lake Community Council, Missoula County, Montana Department of Environmental Quality and participating vendors.

Changeout Partners:

- **Missoula City-County Health Department Air Quality Division**
- **Seeley Lake Community Council**
- **USFS and Montana Department of Natural Resources and Conservation**
- **Montana Department of Environmental Quality**

Participating Woodstove Changeout Vendors:

- Axmen
- Trader Brothers

Final Thoughts

- Build relationships – meetings, individual conversations, events
- Long term presence required
- Quantify the problem through studies – were able to say this was a manageable problem
- Emphasize economics and time savings, but include positive health impacts
- Continued wood stove use education required
- Is a standard wood stove for wood stove change out program appropriate? Devices with very low emissions may be required in cities, small air sheds or where large number of wood stoves are concentrated.
- Engage the media