



Program #10095 - Sustainability - Wood Stove Replacement Pilot 7/14/2022

Department: Nondepartmental **Program Contact:** John Wasitynski
Program Offer Type: Innovative/New Program **Program Offer Stage:** As Adopted
Related Programs: 25121C
Program Characteristics: One-Time-Only Request

Executive Summary

Residential wood combustion is the largest source of human-caused fine particulate (PM) emissions in Multnomah County, especially in the winter months. Health risks from exposure to wood smoke include heart disease, lung disease, respiratory distress, low birth weight, and a growing body of scientific literature suggests that it can be harmful even when there isn't enough to see or smell. Elevated exposure to PM has also been linked to increased mortality from COVID-19. Wood stove removal and replacement with non emitting sources is a proven best practice for reducing exposure to harmful pollution from wood burning. This investment will support the implementation of a pilot woodstove exchange program.

Program Summary

The 2017 American Community Survey estimates that 3,496 households in Multnomah County use wood burning as their primary source of heat, along with an unknown number of secondary wood stoves and an unknown number of wood burning fireplaces, recreational fire pits, and/or chimineas. According to a DEQ study, Multnomah County residents are responsible for the vast majority of wood burning in the Tri-County region, accounting for 48% of annual wood combustion. Wood combustion emissions impact many more people in Multnomah County because of the sheer volume of emissions and the dense urbanized distribution of people across the County.

This program will pilot the implementation of a woodstove exchange program. The program will prioritize geographic areas in diverse and highly impacted neighborhoods, like Cully in NE Portland, that would have the largest impact. This program will help households replace a wood stove, wood insert, or fireplace used as a primary source of heat with a cleaner burning and more efficient device. The non-wood burning replacement devices, likely ductless heat pump systems, emit less greenhouse gas (GHG) and particulate matter; they also are less likely to be a fire risk, or degrade indoor air quality. Heat pumps also can provide cooling during heat events. The project would fund, in full or in part depending on income, the purchase and installation of a replacement home heating device, and/or the removal and decommissioning of a wood burning device.

The program would prioritize households residing in a census tract identified as a target area with low-income households relying on wood burning devices for heat. Based on information from the Washington County wood stove replacement program, each wood stove replacement to heat pump is likely to cost between \$3,000 - \$7,000 with an average cost of about \$5,000.

Performance Measures

Measure Type	Primary Measure	FY21 Actual	FY22 Budgeted	FY22 Estimate	FY23 Offer
Output	# of households served with wood burning appliance replacements*	N/A	N/A	N/A	60-150
Outcome	Annual Particulate Matter emissions reduction**	N/A	N/A	N/A	1,200-30.000

Performance Measures Descriptions

*The number of wood stoves removed will depend on the average cost of each replacement, so it is shown as a range.
**The particulate matter emissions decrease outcome will be heavily dependent on how the corresponding households use wood heat and number of units replaced, therefore it is shown as a range, the value is presented as pounds of particulate matter per year, using an average annual reduction of 200 lbs per year for a wood stove.

Revenue/Expense Detail

	Adopted General Fund	Adopted Other Funds	Adopted General Fund	Adopted Other Funds
Program Expenses	2022	2022	2023	2023
Contractual Services	\$0	\$0	\$0	\$400,000
Materials & Supplies	\$0	\$0	\$0	\$100,000
Total GF/non-GF	\$0	\$0	\$0	\$500,000
Program Total:	\$0		\$500,000	
Program FTE	0.00	0.00	0.00	0.00

Program Revenues				
Intergovernmental	\$0	\$0	\$0	\$500,000
Total Revenue	\$0	\$0	\$0	\$500,000

Explanation of Revenues

State of Oregon - American Rescue Plan (ARP) funding - \$500,000

Significant Program Changes

Last Year this program was:

This program offer falls under the County's Public Health Emergency Response ARP Priority Area.