

## Woodstove Changeout Program Snapshot: Darrington, WA, sponsored by Puget Sound Clean Air Agency



<b>Program Title</b>	Darrington Wood Stove Change-Out Program
<b>Location</b> (City, Counties, Regions included in program)	<ul style="list-style-type: none"> <li>Town of Darrington, Washington, located in Snohomish County</li> <li>Puget Sound Clean Air Agency (includes King, Kitsap, Pierce, and Snohomish counties) has jurisdiction and runs program.</li> </ul>
<b>Population/No. of Homes<sup>†</sup></b> (in program area)	<ul style="list-style-type: none"> <li>Darrington (only area covered by program): 1,300 people/500 homes</li> </ul>
<b>Objectives</b> (NAAQS attainment/maintenance, indoor air, visibility, air toxics, public education)	<ul style="list-style-type: none"> <li>Reduce fine particles from smoke.</li> <li>Reduce air toxics in wood smoke.</li> <li>Town would be non-attainment for daily PM<sub>2.5</sub> NAAQS</li> <li>Help town assume ownership of air quality problem and solution</li> </ul>
<b>Milestones</b> (time frame for program, no. of changeouts, air quality goals, no. of low-income homes targeted, if applicable)	<ul style="list-style-type: none"> <li>Fall 2004: install nephelometer to monitor PM in Darrington</li> <li>Spring 2005: Work with town committee begins</li> <li>Summer 2005: Mail survey of heating/burning practices</li> <li>Fall 2005: "Home Heating EXPO" launches change-out program</li> <li>Winter 2005: first applications approved, vouchers issued and stoves replaced</li> <li>Through Dec. 2006: 55 applications received; 43 vouchers issued; 35 change-outs completed; \$61K in vouchers reimbursed</li> </ul>
<b>Budget</b> (projected/actual cost of program)	<ul style="list-style-type: none"> <li>Agency budgeted approximately \$100K per fiscal year for '06 and '07 (fiscal year is July through June).</li> <li>Town budgeted additional \$20K from permit mitigation fund.</li> </ul>
<b>Funding Sources</b> (government funds, grants, SEPs, fees, etc.)	<ul style="list-style-type: none"> <li>Civil penalties from prior year (\$83K of Agency's \$100K/yr)</li> <li>Fees collected statewide when new wood stoves, fireplace inserts, pellet stoves, or masonry fireplaces are sold/installed (\$30/device; \$17K of Agency's \$100K/yr)</li> <li>\$20K from a local source as a permit mitigation fee to use for wood stove change-outs (town funding).</li> </ul>
<b>Partners</b> (gov't/private organizations involved in changeout program)	<p><b>Town leaders (mayor and council members) and the councilman and citizens who serve on our committee</b> (promotion, review applications, visit homes to document the stove in use, enter data in a web-based application tracking system, guidance)</p> <p><b>The local hardware store</b> (performs most of installations to date)</p> <p><b>The science club at the high school</b> (air monitoring activities, presentations about air quality to the school board and town council, as well as at the national EPA air monitoring conference)</p>



<p><b>Incentives Offered</b> (rebates, discounts, vouchers, special incentives for low-income homes, etc.)</p>	<p><b>Program offers vouchers towards purchase of propane, oil, electric, pellet, and certified stoves to replace existing stoves.</b> Participating vendors accept vouchers as cash and participant pays any difference in cost, minimizing upfront cost to the participant. Voucher's value depends on choice of replacement heating system:</p> <ul style="list-style-type: none"> <li>• \$2,500 for installing propane, oil, or electric stove or furnace (including heat pumps) to replace any wood stove/insert</li> <li>• \$1,500 for installing pellet stove to replace any wood stove/insert</li> <li>• \$500 for installing certified stove to replace an uncertified stove/insert</li> </ul> <p>Agency pays 90% of the voucher value; Town pays 10%.</p>
<p><b>Ordinances/Regulations</b> (mandates for use of cleaner-burning hearth devices)</p>	<ul style="list-style-type: none"> <li>• There is no current requirement to replace older, uncertified wood stoves and inserts. The town is looking at mandated replacement ordinances from other municipalities as a means to improve its air quality.</li> <li>• The Puget Sound Clean Air Agency calls and enforces bans on the use of wood stoves and fireplaces in accordance with State's current two-stage burn ban statute, based on levels of PM<sub>2.5</sub>.</li> </ul>
<p><b>Program Yardstick</b> (means for measuring program success)</p>	<p><b>The primary yardstick for success will be decreasing ambient PM<sub>2.5</sub> pollution levels.</b> If ambient air quality in winter improves, program will have been successful.</p> <p><b>Goal is to replace 50% of the wood stoves/insert inventory, including both uncertified and certified stoves.</b> Agency estimates there are 325 to 350 potential change-outs.</p> <p><b>To date (Dec 2006) program has replaced 35 wood stoves/inserts, or about 10% of the inventory.</b> Most change-outs have been to propane or pellet, with a few certified stoves and at least 2 heat pumps. These 35 change-outs will remove over 9330 pounds of fine particulate from Darrington's air each year.</p>
<p><b>Program Contact</b> (name, organization, phone #, e-mail address)</p>	<ul style="list-style-type: none"> <li>• Amy Fowler, Air Quality Planning - (206) 689-4017, <a href="mailto:amyf@psccleanair.org">amyf@psccleanair.org</a></li> <li>• New agency address as of mid-February 2007: Puget Sound Clean Air Agency (PSCAA) 1904 3<sup>rd</sup> Avenue, Suite 105, Seattle, WA 98101</li> </ul>
<p><b>Lessons Learned</b> (What worked? What didn't? How program can be improved)</p>	<p>Lessons from a town-managed program in a very small town:</p> <ol style="list-style-type: none"> <li>1. Be patient and humble. Working with a group of community members is a huge asset because they know their town, but they also have other jobs/responsibilities/lives. The town taking ownership of the problems and the solutions is the most productive way to approach the change-out process. As a result, recognize that you need to have reasonable expectations as to how long things take.</li> </ol>



<p><b>Lessons Learned (continued)</b></p>	<ol style="list-style-type: none"> <li>2. Seek and develop outside partners that add value, such as members of the Hearth, Patio and Barbecue Association or county health/human services offices, but as much as possible support the town's economy whenever you need goods and services. Keeping the program's money within the town multiplies its effects beyond just cleaner air.</li> <li>3. Meetings may have a high social value as you work to build relationships with community members. This is time worth investing because it will help you do the most important thing:</li> <li>4. <b>Listen to your town partners!</b></li> </ol> <p>Regrets:</p> <ol style="list-style-type: none"> <li>1. Should have increased maximum voucher value by \$500 for each category before starting. A higher voucher value on the certified stoves would be helpful to incentivize change-outs for those who will only burn wood.</li> <li>2. Having "storm of the century" wind storm knock out power region-wide, causing radio personalities to extol the virtues of woodstoves, as we entered the second winter of the program.</li> </ol>
<p><b>Outreach/Marketing</b> (e.g., radio public service announcements (PSAs), workshops, woodstove expo, flyers, mailouts, other?)</p>	<p>Direct mail and posting signs around town, as well as articles in the town newsletter and the school's newsletter. Kick-off event was well publicized through a letter from the mayor and postcards to survey respondents, signage, fliers, church bulletins, notices in weekly folders sent home with school children, and inserts in hardware store ads. Direct marketing also included speaking with community groups, such as at a regular Senior Center lunch.</p>
<p><b>Air Quality Data</b> (current air quality status in the area covered by this program, and is reducing wood smoke believed to be an important factor in improving local air quality?)</p>	<ul style="list-style-type: none"> <li>• Estimate that Town of Darrington would not attain PM<sub>2.5</sub> NAAQS standards in winter.</li> <li>• AQI in "good" range for most of year. Wintertime inversions trap wood smoke causing exceedances of NAAQS levels and local health goals. Small town with minimal industry (one mill, outside of town) and only seasonal AQ problems. Hourly readings show peak PM values overnight, typically midnight to 1 AM, indicating wood smoke from dampered-down stoves. If the program can reduce the number of wood smoke sources, and improve the burning practices of the users that continue to burn wood, then seasonal AQ problems should improve significantly.</li> </ul>
<p>†A housing unit is defined as a house, apartment, mobile homes, group of rooms, or single room that is occupied (or, if vacant, is intended for occupation) as a separate living quarters (United States Census Bureau).</p>	

