

Wood Stove Changeout Program Snapshot: Swinomish Indian Tribal Community La Conner, Washington



Program Title	Wood Stove Changeout Program
Location (City, Counties, Regions included in program)	Southeastern part of Fidalgo Island, which lies west of the Swinomish Channel near the town of La Conner, Skagit County, Washington
Population/No. of Homes (No. of people/homes in area covered by program)	<ul style="list-style-type: none"> Population: Approximately 850 enrolled Tribal members as of March 2008 Assisted Tribal housing: (68) Private Tribal housing: (52)
Objectives (NAAQS attainment/maintenance, indoor air, visibility, air toxics, public education)	<ul style="list-style-type: none"> Improve indoor air quality in tribal members' homes. Reduce asthma prevalence, mold growth, and dust mites.
Milestones (time frame for program, no. of changeouts, air quality goals, no. of low-income homes targeted, if applicable)	<ul style="list-style-type: none"> First SEP changeout - summer 2002 - 13 stoves Second SEP changeout summer-Fall 2005 - 22 stoves Began Tribal changeout in 2007 with competitive bidding for stoves/installation. Goal: 120 homes by end of year. Goal achieved By early 2008 all but two Tribal homes were changed out. Next phase of program will seek to replace stoves in off-reservation homes
Budget (projected/actual cost of program)	<ul style="list-style-type: none"> 2002 SEP Changeout Approx. \$ 36,000 2005 SEP Changeout Approx. \$32,000 2007 Tribal Changeout Projected \$292,000 Actual (Housing Authority \$ 50,000 and Tribal General fund \$141,000 2007 EPA Region 10 IAQ monitors \$ 18,000
Funding Sources (government funds, grants, SEPs, fees, etc.)	<ul style="list-style-type: none"> 2002 PSE Supplemental Environmental Project (SEP) 2005 CAN Stove Manufacturer Sep Project 2007 Swinomish Housing Authority 2007 SITC general fund U.S. EPA Region 10 (grant funds for hand-held monitors)



Partners (gov't/private organizations involved in changeout program)	<ul style="list-style-type: none"> • Skagit Housing Authority (initial phase) 2002 • Whatcom Opportunity Council 2005 • Swinomish Tribe & Swinomish Housing Authority 2007 • U.S. EPA Region 10 2007
Incentives Offered (rebates, discounts, vouchers, special incentives for low-income homes, etc.)	<ul style="list-style-type: none"> • 100% stove purchase/installation for qualified homeowners (with proof that income less than 125% of poverty standard) • Asthmatic residences are prioritized for change-outs
Ordinances/Regulations (mandates for use of cleaner-burning hearth devices)	<ul style="list-style-type: none"> • (are there any ordinances/restrictions for burning?) • We have Tribal ordinances for open burning and in the final stages for getting approval for our TIP for open burning. • There are no Regs for woodstove use during burn bans
Program Yardstick (means for measuring program success; e.g. number of stoves changed out)	<ul style="list-style-type: none"> • PM2.5 concentrations in the Truckee area have been reduced by approximately 30% from 1993 to 2006 although development increased by 70% during that time period.
Program Contact (name, organization, phone #, e-mail address)	<ul style="list-style-type: none"> • Tony Basabe, Ph.D, Manager, Swinomish Air Quality Program; (360) 466-2512, tbasabe@swinomish.nsn.us
Lessons Learned (What worked? What didn't? How program can be improved)	<ul style="list-style-type: none"> • Stove installation costs reduced by eliminating housing authority's administration, and competitively bidding stove purchase/installation • Average stove replacement costs dropped from \$2500 in first year of program to around \$1400 in second year • "In most cases, wood stove changeouts improve indoor air quality far beyond reducing fine particulate and carbon monoxide in the occupied space - that includes the reduction of exposure to pathogens and toxics from the crawl and attic spaces and assist in reducing moisture in most homes" - Tony Basabe, Ph.D., Swinomish Air Program Manager
Outreach/Marketing (e.g., radio public service announcements (PSAs), workshops, woodstove expo, flyers, mailouts, other?)	<ul style="list-style-type: none"> • All changeout residents were given a 10 minute proper woodstove use instructions and encouraged to use dry and seasoned firewood. • Proper woodstove use and fuel preparation are problematic in a few of the several homes tested since the change-outs



Air Quality Data

(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?)

- Focus of program is improvements in indoor air quality for Tribal members rather than ambient air quality (what IAQ data is available?)
- SITC studies indicate dramatic reductions of PM2.5 after changeouts
- PM2.5 reductions attributed in large part to the air tightness of new stoves and combustion make up air coming from outside the indoor envelop. However EPA certified stove can back draft if pressure differential is sufficient enough.

