

SmokeWatch

(wood heater community education and
behaviour change pilot program)

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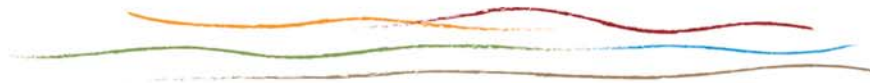


because the environment matters



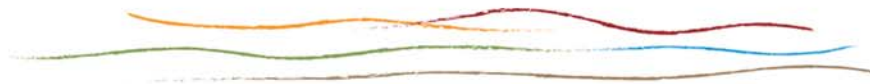
Background

- Wood heater survey undertaken - March 2004
 - 400 wood heater users in Adelaide Plains, Adelaide Hills, Loxton/Waikerie and Mount Gambier
- 'Smoke is no Joke' - 2004 and 2005
 - state wide media campaign



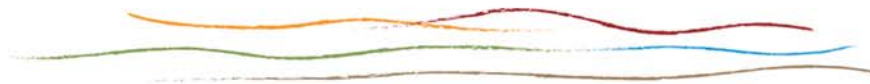
Development of SmokeWatch

- Councils invited to participate in development
- Eastern Health Authority, City of Unley and Adelaide Hills Council involved in the development
- Adelaide Hills Council agreed to assist in implementing pilot



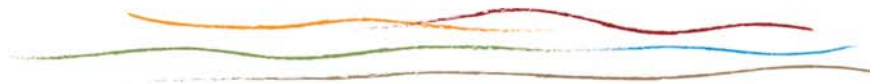
Objectives

- Raise awareness of polluting effects of wood smoke
- Build an understanding that it is important to follow good wood heating practices to reduce unnecessary pollution, keep costs down and maximise home comfort
- Advise wood heaters on the correct procedures for effectively using a wood heater
- Encourage and foster good wood heating practices through a range of behaviour change initiatives



Objectives (cont.)

- Develop a wood heater package that can be implemented by councils at minimal cost to the EPA and local government
- Build the capacity of councils to take ownership and resolve wood heater issues
- Raise awareness of the role of the EPA and the State Government in monitoring pollution in South Australia



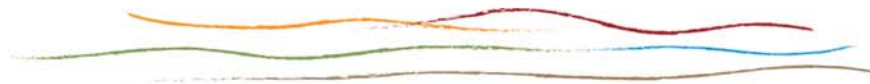
Community-Based Social Marketing Approach

- Commitment
- Prompts
- Norms
- Communications
- Incentives



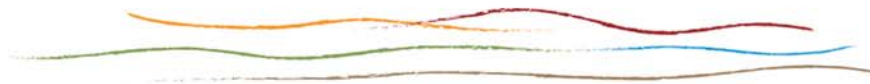
SmokeWatch Core Strategies

- Gain commitment to undertake efficient wood heater practices
- Train council officers
- Competition
- School education
- Build partnerships
- Communication and promotion



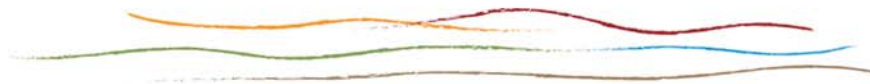
Air Quality Monitoring

- Site - Woodside Primary School
- What was measured?
 - gaseous pollutants (CO, NO₂, SO₂, benzene, formaldehyde)
 - particle pollution (PM₁₀, PM_{2.5})



Differences in 2007 program

- Behaviour change strategies were concentrated predominantly in and around the Woodside township
- Additional emphasis placed on engaging the community
- New instrument (APS) used to measure proportions of different sized particles in the air



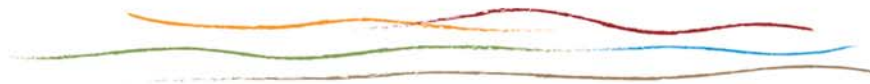
Evaluation of behaviour change component

	After 2007 program	After 2006 program	July 2006
Awareness of the SmokeWatch program	43% (Woodside - 70%)	59%	N/A
Information received enabled correct wood heating procedures to be followed	54%*	58%	N/A
Changed behaviour as a result of SmokeWatch program	24%**	19%	N/A
Always burn only dry seasoned wood	92%	94%	87%
Always keep air vent open for 20 minutes after starting and reloading	75%	69%	39%
Always keep fire alive and bright but let it go out at night	58%	59%	No data available
Always check no smoke coming from chimney 20 minutes after starting	22%***	32%	47%
Believe wood smoke is a problem in Adelaide Hills	28%	25%	22%
Believe wood smoke negatively impacts me in winter	16%	18%	15%

*37% indicated that they already knew how to use correct procedures (increase of 17% since 2006)

**59% already aware of the type of wood to use and how to correctly and efficiently use wood fires

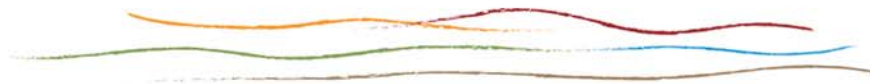
***30% indicated that they sometimes checked there is no smoke coming from their chimney



Air monitoring results

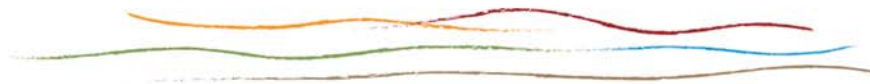
Pollutant	Maximum 2007 Average	Maximum 2006 Average	NEPM (National Standards) (EPHC, 2007)
			Standard / Investigation Limit
PM ₁₀ (µg/m ³)	30.1	29.6	50 µg/m ³ (24 hour average)
CO (ppm)	1.4	1.7	9 ppm (8 hour rolling average)
NO ₂ (ppm)	0.018	0.023	0.12 ppm (1 hour average)
SO ₂ (ppm)	0.008	0.007	0.20 ppm (1 hour average)
Benzene* (ppm)	0.002	0.002	0.003 ppm (annual average - Investigation Limit)
Formaldehyde (ppm)	0.011	0.025	0.04 ppm (24 hour average - Investigation Limit)

* Benzene has an annual averaged Air Toxics NEPM Investigation Level. As there is insufficient data for an annual average, the mean value during the monitoring was used for comparison.



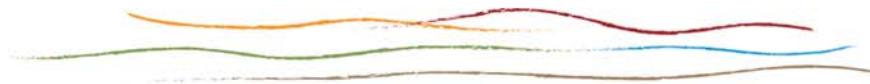
Conclusions

- General increase in efficient wood heater use
- Residents still remain generally indifferent to negative impacts of wood smoke in the area
- Increase in efficient wood heater use not reflected in monitoring results
- While current PM_{2.5} standards probably not exceeded there is concern that it could be exceeded in extreme conditions

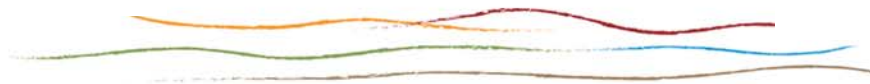
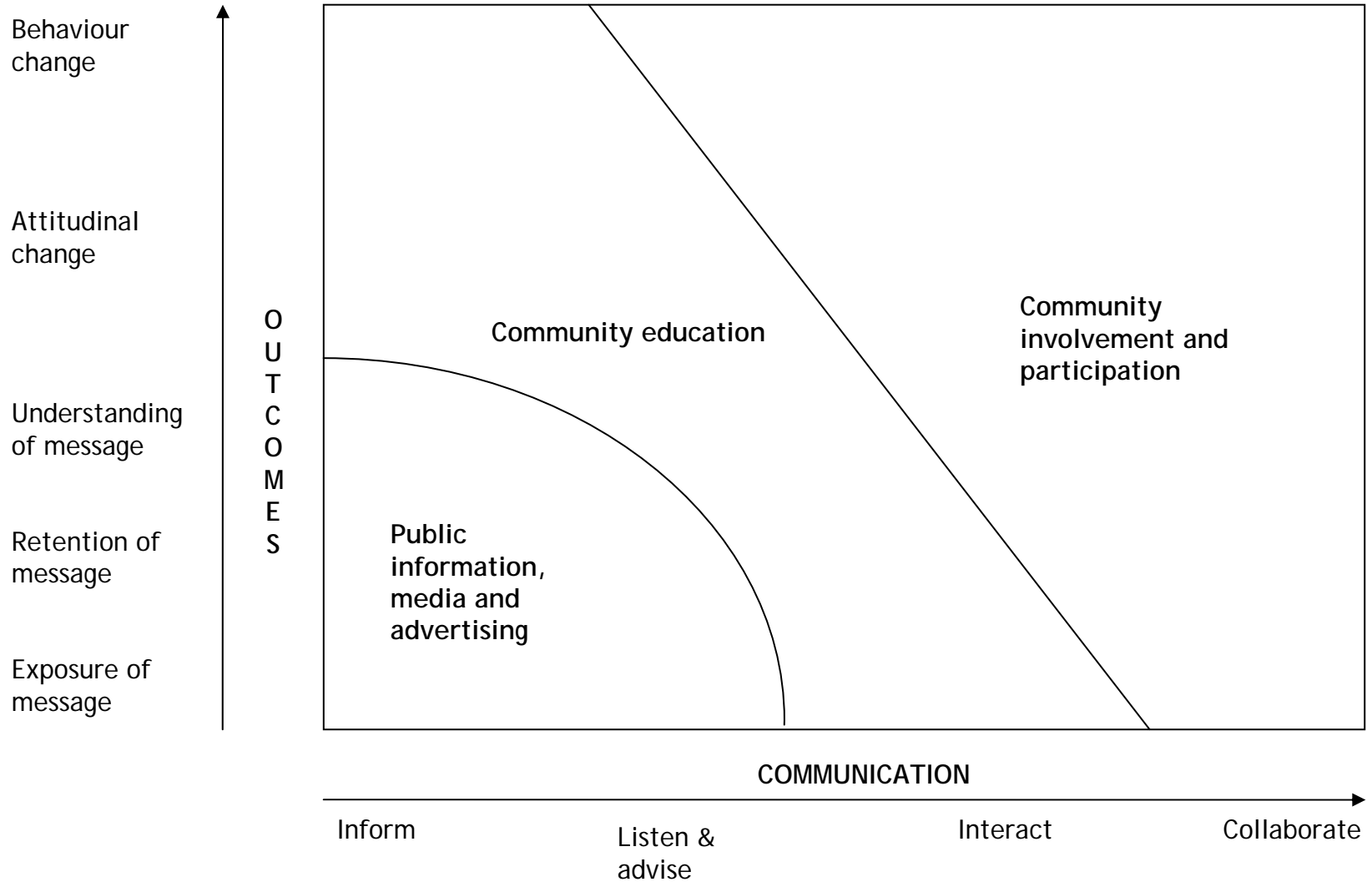


Where to from here?

- Continued support for AHC - communication materials, schools program
- 2008 - wood heater survey in Mount Gambier
- Potential SmokeWatch program in Mount Gambier in future years



Education approaches



Considerations for new program

How do we:

- move beyond awareness raising and engage people critically and creatively in their own communities to plan and participate, taking ownership in the issue?
- promote messages that don't lead to other unsustainable behaviours (eg. saving money on firewood to then save and buy a fuel guzzling car) but that promote and tap into 'intrinsic' values for the environment?
- effectively communicate the health impacts of wood smoke?

