

Thurston County Hazardous Waste Management Plan Update Stakeholders Group Meeting

July 17, 2008 3:00-5:00



Public Health and Social Services Department
www.co.thurston.wa.us/health

AGENDA

- 3:00 **Welcome & Introductions – Mike**
- 3:05 **Guiding Principles and Vision - Mike**
- 3:15 **Thurston County Demographics – brief overview – Rachel**
- 3:25 **Household Hazardous Waste Education – Rachel**
 - **Goals & Objectives**
 - **Program Outreach (handout)**
 - example showing evaluation measures
 - 2008 time and money
 - **Gaps**
 - **Discussion**
 - our changes
 - data if needed
- 4:55 **Adjourn – Mike**

Community Based Social Marketing

Ask:

- What is behavior change you seek?
- Define audience
- Identify barriers and motivators
 - Surveys, focus groups, interviews
- Test with pilot project
- Measure



...has taught us...

- Direct contact best
- Media, publications can create awareness but not much change
- Commitment
- Social diffusion, norms
- Prompts
- Incentives, convenience



Population

Jurisdiction	1990	2000	2007
Bucoda	536	628	655
Lacey	19,279	31,226	35,870
Olympia	33,729	42,514	44,460
Rainier	991	1,492	1,705
Tenino	1,292	1,447	1,520
Tumwater	9,976	12,698	13,340
Yelm	1,337	3,289	4,845
Chehalis Res.	491	691	N/A
Nisqually Res.	578	599	N/A
Unincorp. Co.	94,098	114,061	135,615
County Total	162,307	207,355	238,000

Average Annual Population Change

Jurisdiction	1990-2000	2000-2007
Bucoda	1.6%	0.6%
Lacey	4.9%	2.0%
Olympia	2.3%	0.6%
Rainier	4.2%	1.9%
Tenino	1.1%	0.7%
Tumwater	2.4%	0.7%
Yelm	9.4%	5.7%
Chehalis Res.	3.5%	N/A
Nisqually Res.	0.4%	N/A
Unincorp. Co.	1.9%	2.5%
County Total	2.5%	2.0%

Population Projections

Jurisdiction	2010	2020	2030
Cities & UGAs	173,000	222,000	265,000
Reservations	690	900	1,110
Rural County	81,000	96,000	107,000
County Total	255,000	319,000	373,000

**UGA: Urban Growth Area
Updated in 2004**

Household Characteristics

Characteristics	1970	2000	
# Households	25,186	81,625	
Avg. Household Size	2.70	2.50	
Households w/Children	46%	35%	
65+ Households	19%	20%	

Racial Composition 2000 Census

Race and Ethnicity	Number	Percent
White	177,617	85.7%
Black/African American	4,881	2.4%
American Indian & Alaska Native	3,143	1.5%
Asian	9,145	4.4%
Native Hawaiian & Other Pacific Islndr	1,078	1.0%
Other Race	4,584	2.2%
Two or More Races	4,225	2.0%
Hispanic*	9,392	4.5%

*Denotes a place of origin and may be of any race.

Languages

- 1,571 households in Thurston County are linguistically isolated.
 - 55% speak an Asian or Pacific Islander language i.e. Korean, Vietnamese, Carolinian (U.S. territory related), Marshallese
 - 34% speak Spanish
- 22,536 residents age 5 and up speak a language other than English at home. (This does not equate to an inability to speak English.)

Source: 2006 American Community Survey, U.S. Census Bureau

Education Program

What we want:

- feedback on direction & content
- where to put more or less emphasis
- any changes in goals/objectives

Household Hazardous Waste (*Materials*) Education

Goal 1. Protect ground water, surface water, soils, sediments, and private property from hazardous materials contamination.



Goal 2. Prevent poisoning and reduce acute (short-term) and chronic (long-term) exposures to hazardous chemicals at home and school.



Goal 3. Increase waste reduction (including source reduction) which conserves resources and reduces demand for disposal and recycling services.

Goal 4. Increase the percentage of hazardous waste collected (that cannot be prevented through waste reduction in the first place).

Goal 5. Reduce the amount of hazardous materials that are improperly stored, improperly disposed, and accidentally spilled into the environment.



Goal 6. Reduce damage to collection and transfer vehicles, disposal equipment, and disruption of treatment facilities by ensuring hazardous waste is kept out of these facilities or systems.

Goal 7. Reduce potential for causing publicly owned facilities such as the landfill or sewage treatment plants to exceed pollutant discharge limits.

GOOD GOALS?

Sources to use for Indicators

- *Groundwater, soil protection:* Hotspots map
- *Surface water:* NPDES violations, local studies, DOE/DOH studies
- *Poison Control reports*
- *Reduction:* Hardest to measure; look for reduction in hhw collected per capita...watch types of waste that should be diminishing: solvents, pesticides, oil paint vs. batteries, fluorescents (need statistician!)
- *Proper disposal:* Waste sorts, % using HazoHouse & WasteMobile, used oil
- *Proper storage and disposal, less spills:* SHA Reports, complaints received, spills
- *Equipment not damaged, facilities not polluting:* reports from LeMay, cities, LOTT

Objective 1

- Continue delivery of household hazardous waste education programs, whenever possible, resulting in measurable changes in waste reduction, recycling, and proper disposal.

Methods of Outreach (handout)

- One-on-one neighborhood
- Broad & electronic media
- Direct mail
- School & adult classes
- Lending tubs
- Point-of-Purchase
- Fairs and events
- Displays, materials
- Pledges and signs
- Take-back for free item
- Product stewardship
- Market transformation

Objective 2

- Continue and create new partnerships with retailers of hazardous products to educate consumers.

Objective 3

- Assess customer needs and collect information about target audiences to design programs that will result in behavior change or increased knowledge of options and services.

Perception and Practice Survey

- Telephone, county-wide, 400+ adults
- Sept 2004 baseline
- Repeated summer 2005
- Repeat again this August-Sept
- “Chem Product Use and Children”
- Asks @ sources of information
- Asks about behavior



Within past year, have you read or heard local information about how to protect children from the harmful effects of toxic chemicals used in or around the home?

Thurston County adults 18+ with children	2004	2005
Yes	50%	67%
No	50%	33%
Total	100%	100%

Where did you see, hear or read that information?

Adults 18+, with and without children

(asked only of those that said yes to previous)

TC adults 18+	2004	2005
Brochure, pamphlet or fact sheet	36%	63%
Local newspaper	31%	53%
Friend, family	x	43%
School or childcare	18%	30%
Internet or website	x	37%
Doctor, nurse, other healthcare	29%	29%
Local radio	18%	28%
TCPHSS	11%	17%
Community event	8%	15%

Changing Behavior?

- Head Start staff & parents did in-class eval and follow-up
- 23/58 responded
- 39% started using non-toxic cleaners
- 35% put a doormat at entrance
- 30% switched to non-toxic weed control



Common Sense Gardening 2003 Survey

- Phone survey of over 400 residents
- 1/3 residents have read a CSG guide
- 66% changed lawn or gardening practices
- 40% reported using less toxic chemicals as a result



- 94% who attended a workshop used the information
- 30% said hard to find less-hazardous products

Objective 4

- Implement programs targeting high risk and high volume hazardous materials as a first priority, then high risk and low volume hazardous materials as a second priority. Next, target low risk and high volume hazardous materials, then materials that are low risk and low volume.

Priority Program Matrix – Old System

	Low Risk	High Risk
Low Volume	Cleaners	Pesticides
High Volume	Paint	Oil

- Volume of waste, not volume used
- Does not acknowledge exposure potential or vulnerable populations

Revised Objective 4

- Prioritize hazardous materials that are highly toxic (acute and chronic), have high exposure or contamination potential, and/or are produced in large amounts.
 - Research newly emerging chemical concerns and develop programs for those that meet the above criteria.

Objective 5

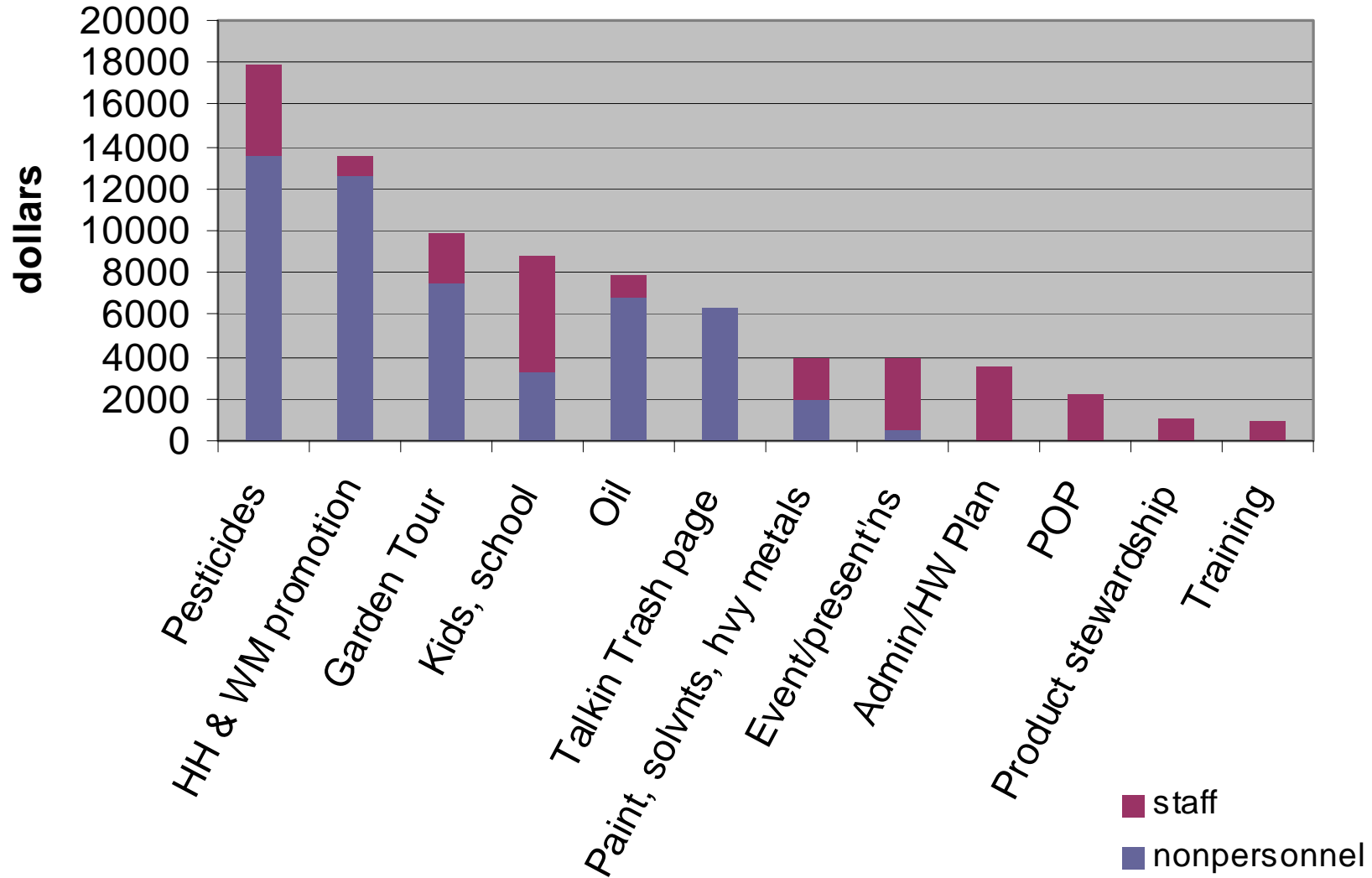
- Increase understanding of individual responsibility of proper selection, use, storage, and disposal of hazardous products.

Evaluation Example:

Survey Data

- 2000 Hazardous Waste Survey
 - 67% take unwanted HHW to HazoHouse or WasteMobile
 - 83% knew of HazoHouse and WasteMobile
 - Largest single way they learned of HazoHouse was signs at landfill
 - Over half learned about through newspaper, newsletter, brochure

2008 Workplan Expenses



OKAY OBJECTIVES?

A few gaps we have discussed...

Gaps

- Not equitable – services mainly available to drivers and English-speaking
- We do not know who is NOT being reached (phone surveys help)
- Need to use results of environmental sampling as evaluation
- Are people purchasing less HHM?
- Need better take-back and recycling infrastructure for antifreeze, battery, fluorescents, paint, pharmaceuticals, small electronics
- Who addresses radon, electromagnetic radiation?

Input Please

- Other gaps?
- What is the mechanism for when education does not meet the goals we have set?
 - Local ordinance prohibiting MRW from solid waste disposal
 - Education plus enforcement most effective

New (suggested) Objective

- Further policies that reduce the toxicity of products in the marketplace by promoting, for example, manufacturer take-back programs, the precautionary principle, market transformation, and the Thurston County Sustainability Policy (Environmentally Preferred Purchasing).

- How to prioritize
 - By chemicals, by audience, by method
- Funding
 - Health education funded by solid waste fees
- Evaluation
 - If program can't be evaluated, drop it?

New (suggested) Objective

- Relate hazardous materials education to broader regional and global environmental health concerns such as restoring Puget Sound and mitigating climate change.

New (suggested) Objective

- Implement programs reaching vulnerable and underserved populations

Thank you!

THURSTON COUNTY WASHINGTON Known Areas of Soil or Groundwater Concern

THIS MAP IS BASED ON DATA THAT IS NOT NEARLY FULLY UP-TO-DATE. THESE AREAS MAY BE SUBJECT TO CHANGE AS NEW DATA IS OBTAINED OR AS REGULATORY PROGRAMS EVOLVE. THIS IS NOT A WARRANTY OF ANY KIND.

April 2004

- AREAS OF POTENTIAL CONTAMINATION
KNOWN TO DATE OF 2004. 1:250,000 SCALE
- REMOVED ORANGE AREAS
Areas containing significant numbers of wells with nitrate levels exceeding 4 parts per million
- REMOVED BROWN AREAS
Areas containing significant numbers of wells with nitrate levels exceeding 4 parts per million
- AREAS OF VERY LIMITED GROUNDWATER
Potentially limited to shallow enough water for any type of use
- AREAS OF LIMITED GROUNDWATER
Potentially limited to shallow enough water for any type of use

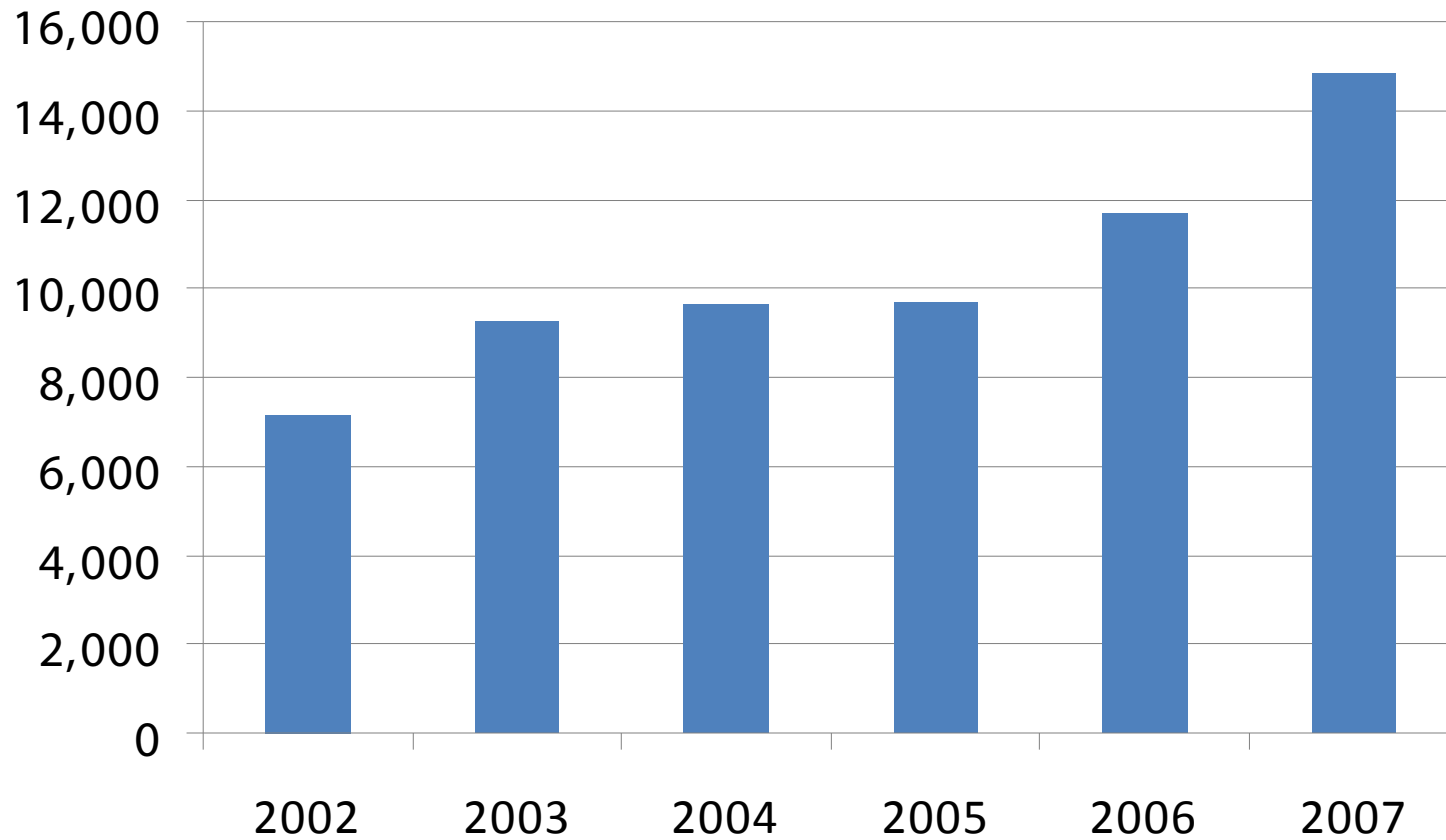
- Localities & Towns**
- 1. 1st Avenue
 - 2. 2nd Avenue
 - 3. 3rd Avenue
 - 4. 4th Avenue
 - 5. 5th Avenue
 - 6. 6th Avenue
 - 7. 7th Avenue
 - 8. 8th Avenue
 - 9. 9th Avenue
 - 10. 10th Avenue
 - 11. 11th Avenue
 - 12. 12th Avenue
 - 13. 13th Avenue
 - 14. 14th Avenue
 - 15. 15th Avenue
 - 16. 16th Avenue
 - 17. 17th Avenue
 - 18. 18th Avenue
 - 19. 19th Avenue
 - 20. 20th Avenue
 - 21. 21st Avenue
 - 22. 22nd Avenue
 - 23. 23rd Avenue
 - 24. 24th Avenue
 - 25. 25th Avenue
 - 26. 26th Avenue
 - 27. 27th Avenue
 - 28. 28th Avenue
 - 29. 29th Avenue
 - 30. 30th Avenue
 - 31. 31st Avenue
 - 32. 32nd Avenue
 - 33. 33rd Avenue
 - 34. 34th Avenue
 - 35. 35th Avenue
 - 36. 36th Avenue
 - 37. 37th Avenue
 - 38. 38th Avenue
 - 39. 39th Avenue
 - 40. 40th Avenue
 - 41. 41st Avenue
 - 42. 42nd Avenue
 - 43. 43rd Avenue
 - 44. 44th Avenue
 - 45. 45th Avenue
 - 46. 46th Avenue
 - 47. 47th Avenue
 - 48. 48th Avenue
 - 49. 49th Avenue
 - 50. 50th Avenue

- SPONSOR OF CONCERN**
- 1. 1st Avenue
 - 2. 2nd Avenue
 - 3. 3rd Avenue
 - 4. 4th Avenue
 - 5. 5th Avenue
 - 6. 6th Avenue
 - 7. 7th Avenue
 - 8. 8th Avenue
 - 9. 9th Avenue
 - 10. 10th Avenue
 - 11. 11th Avenue
 - 12. 12th Avenue
 - 13. 13th Avenue
 - 14. 14th Avenue
 - 15. 15th Avenue
 - 16. 16th Avenue
 - 17. 17th Avenue
 - 18. 18th Avenue
 - 19. 19th Avenue
 - 20. 20th Avenue
 - 21. 21st Avenue
 - 22. 22nd Avenue
 - 23. 23rd Avenue
 - 24. 24th Avenue
 - 25. 25th Avenue
 - 26. 26th Avenue
 - 27. 27th Avenue
 - 28. 28th Avenue
 - 29. 29th Avenue
 - 30. 30th Avenue
 - 31. 31st Avenue
 - 32. 32nd Avenue
 - 33. 33rd Avenue
 - 34. 34th Avenue
 - 35. 35th Avenue
 - 36. 36th Avenue
 - 37. 37th Avenue
 - 38. 38th Avenue
 - 39. 39th Avenue
 - 40. 40th Avenue
 - 41. 41st Avenue
 - 42. 42nd Avenue
 - 43. 43rd Avenue
 - 44. 44th Avenue
 - 45. 45th Avenue
 - 46. 46th Avenue
 - 47. 47th Avenue
 - 48. 48th Avenue
 - 49. 49th Avenue
 - 50. 50th Avenue



Household Hazardous Waste Collection

HazoHouse Residential Customers



Customers as a Percent of Population v. Percent Population Change

