Thurston County Hazardous Waste Management Plan Update Stakeholders Group Meeting

July 17, 2008  3:00-5:00
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
<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>1990</th>
<th>2000</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bucoda</td>
<td>536</td>
<td>628</td>
<td>655</td>
</tr>
<tr>
<td>Lacey</td>
<td>19,279</td>
<td>31,226</td>
<td>35,870</td>
</tr>
<tr>
<td>Olympia</td>
<td>33,729</td>
<td>42,514</td>
<td>44,460</td>
</tr>
<tr>
<td>Rainier</td>
<td>991</td>
<td>1,492</td>
<td>1,705</td>
</tr>
<tr>
<td>Tenino</td>
<td>1,292</td>
<td>1,447</td>
<td>1,520</td>
</tr>
<tr>
<td>Tumwater</td>
<td>9,976</td>
<td>12,698</td>
<td>13,340</td>
</tr>
<tr>
<td>Yelm</td>
<td>1,337</td>
<td>3,289</td>
<td>4,845</td>
</tr>
<tr>
<td>Chehalis Res.</td>
<td>491</td>
<td>691</td>
<td>N/A</td>
</tr>
<tr>
<td>Nisqually Res.</td>
<td>578</td>
<td>599</td>
<td>N/A</td>
</tr>
<tr>
<td>Unincorp. Co.</td>
<td>94,098</td>
<td>114,061</td>
<td>135,615</td>
</tr>
<tr>
<td>County Total</td>
<td>162,307</td>
<td>207,355</td>
<td>238,000</td>
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</table>
# Average Annual Population Change

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Bucoda</td>
<td>1.6%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Lacey</td>
<td>4.9%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Olympia</td>
<td>2.3%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Rainier</td>
<td>4.2%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Tenino</td>
<td>1.1%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Tumwater</td>
<td>2.4%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Yelm</td>
<td>9.4%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Chehalis Res.</td>
<td>3.5%</td>
<td>N/A</td>
</tr>
<tr>
<td>Nisqually Res.</td>
<td>0.4%</td>
<td>N/A</td>
</tr>
<tr>
<td>Unincorp. Co.</td>
<td>1.9%</td>
<td>2.5%</td>
</tr>
<tr>
<td>County Total</td>
<td>2.5%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>
Population Projections

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cities &amp; UGAs</td>
<td>173,000</td>
<td>222,000</td>
<td>265,000</td>
</tr>
<tr>
<td>Reservations</td>
<td>690</td>
<td>900</td>
<td>1,110</td>
</tr>
<tr>
<td>Rural County</td>
<td>81,000</td>
<td>96,000</td>
<td>107,000</td>
</tr>
<tr>
<td>County Total</td>
<td>255,000</td>
<td>319,000</td>
<td>373,000</td>
</tr>
</tbody>
</table>

UGA: Urban Growth Area
Updated in 2004
# Household Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>1970</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td># Households</td>
<td>25,186</td>
<td>81,625</td>
</tr>
<tr>
<td>Avg. Household Size</td>
<td>2.70</td>
<td>2.50</td>
</tr>
<tr>
<td>Households w/Children</td>
<td>46%</td>
<td>35%</td>
</tr>
<tr>
<td>65+ Households</td>
<td>19%</td>
<td>20%</td>
</tr>
</tbody>
</table>
## Racial Composition 2000 Census

<table>
<thead>
<tr>
<th>Race and Ethnicity</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>177,617</td>
<td>85.7%</td>
</tr>
<tr>
<td>Black/African American</td>
<td>4,881</td>
<td>2.4%</td>
</tr>
<tr>
<td>American Indian &amp; Alaska Native</td>
<td>3,143</td>
<td>1.5%</td>
</tr>
<tr>
<td>Asian</td>
<td>9,145</td>
<td>4.4%</td>
</tr>
<tr>
<td>Native Hawaiian &amp; Other Pacific Island</td>
<td>1,078</td>
<td>1.0%</td>
</tr>
<tr>
<td>Other Race</td>
<td>4,584</td>
<td>2.2%</td>
</tr>
<tr>
<td>Two or More Races</td>
<td>4,225</td>
<td>2.0%</td>
</tr>
<tr>
<td>Hispanic*</td>
<td>9,392</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

*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.
Protect Kids from Toxins

• Interviews
• WIC – asked preferences
• Hands-On Children’s Museum poster, what does “toxic” mean?
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?

<table>
<thead>
<tr>
<th>Thurston County adults 18+ with children</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>50%</td>
<td>67%</td>
</tr>
<tr>
<td>No</td>
<td>50%</td>
<td>33%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Where did you see, hear or read that information?
Adults 18+, with and without children
(asked only of those that said yes to previous)

<table>
<thead>
<tr>
<th>Source</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brochure, pamphlet or fact sheet</td>
<td>36%</td>
<td>63%</td>
</tr>
<tr>
<td>Local newspaper</td>
<td>31%</td>
<td>53%</td>
</tr>
<tr>
<td>Friend, family</td>
<td>x</td>
<td>43%</td>
</tr>
<tr>
<td>School or childcare</td>
<td>18%</td>
<td>30%</td>
</tr>
<tr>
<td>Internet or website</td>
<td>x</td>
<td>37%</td>
</tr>
<tr>
<td>Doctor, nurse, other healthcare</td>
<td>29%</td>
<td>29%</td>
</tr>
<tr>
<td>Local radio</td>
<td>18%</td>
<td>28%</td>
</tr>
<tr>
<td>TCPHSS</td>
<td>11%</td>
<td>17%</td>
</tr>
<tr>
<td>Community event</td>
<td>8%</td>
<td>15%</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th></th>
<th>Low Risk</th>
<th>High Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Volume</strong></td>
<td>Cleaners</td>
<td>Pesticides</td>
</tr>
<tr>
<td><strong>High Volume</strong></td>
<td>Paint</td>
<td>Oil</td>
</tr>
</tbody>
</table>

- 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
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!
Household Hazardous Waste Collection

HazoHouse Residential Customers

- 2002: 7,000
- 2003: 9,000
- 2004: 11,000
- 2005: 12,000
- 2006: 14,000
- 2007: 15,000
Customers as a Percent of Population v. Percent Population Change

- % of Population
  - 2002: 3%
  - 2003: 4%
  - 2004: 4%
  - 2005: 5%
  - 2006: 6%
  - 2007: 7%

- Population Change
  - 2002: 0%
  - 2003: 0%
  - 2004: 0%
  - 2005: 1%
  - 2006: 2%
  - 2007: 3%