How to Monitor Progress and Evaluate Your Program

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- This presentation is excerpted from *Do-It-Yourselfers and Used Oil Disposal: Survey and Focus Groups, Phase II Analysis and Recommendations*, a report for the CIWMB now in last stages of preparation.
- Comments and suggestions are welcome.

Topics

1. Assessment
   - The size of the used oil/filter problem
   - How much are we collecting now?
2. Monitoring over time
3. Evaluation
   - Impact of a program initiative
   - What can we do to collect more?
   - Big problems with little surveys

1. ASSESSMENT—How big is the problem?

- Counties: use the per-year estimates in the report (or as recommended by the CIWMB's Used Oil Program); increment by growth in number of households in county
  - Numbers of DIY households & STMs
  - Volume of oil & filters they generate
- Cities: use the method of the report (or as recommended or provided by UOP staff)

1. How big is the problem? (What NOT to do)

- Don’t use per capita measures based only on aggregate data & assumptions—they introduce error
- Don’t use surveys unless you are prepared to spend a LOT of money
  - Large sample size & complex design are needed to overcome extreme variation in volumes of oil disposed
  - Estimates of improper disposal are severely biased: difficult and costly to obtain accurate estimtes
- Exception: surveys of well defined & contained populations:
  - Marinas
  - Agricultural operators

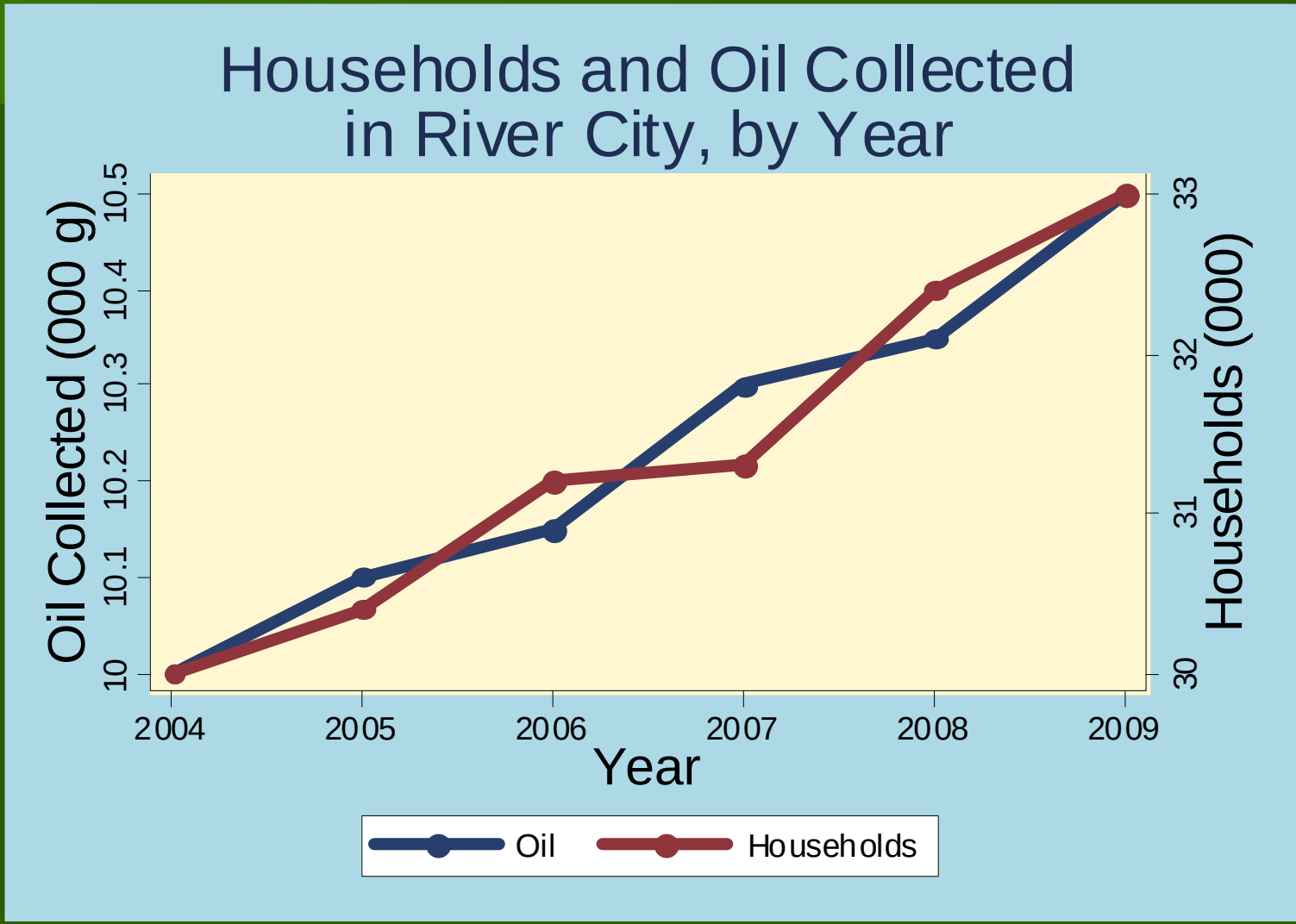
1. ASSESSMENT—How much are we collecting now?

- Count only oil and filters collected from the DIY/STM public over a fiscal year
- Train collection centers to keep accurate logs of DIY oil
- Reports of oil collected from collection centers should approximately match their claims for reimbursement
  - Limitation: very small centers may not submit claims

2. Monitoring: what progress are we making over time?

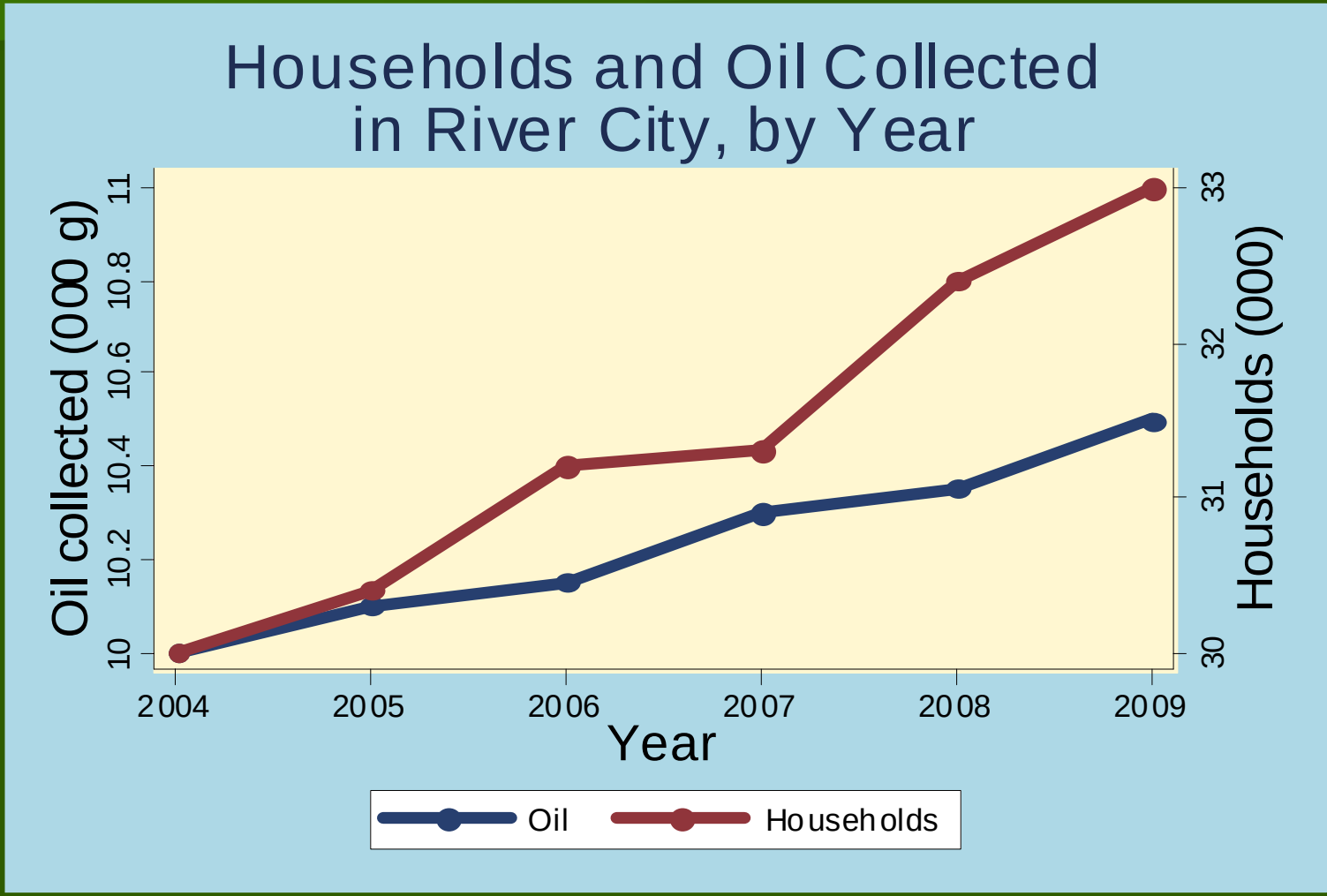
- Keep track of three quantities per year:
  - Number of households in county (or city)
  - Gallons of oil collected from the public
  - Number of filters collected from the public
- Plot them by year starting at the same point on the graph
- Growth in oil collected should exceed growth in households

Can’t tell trend



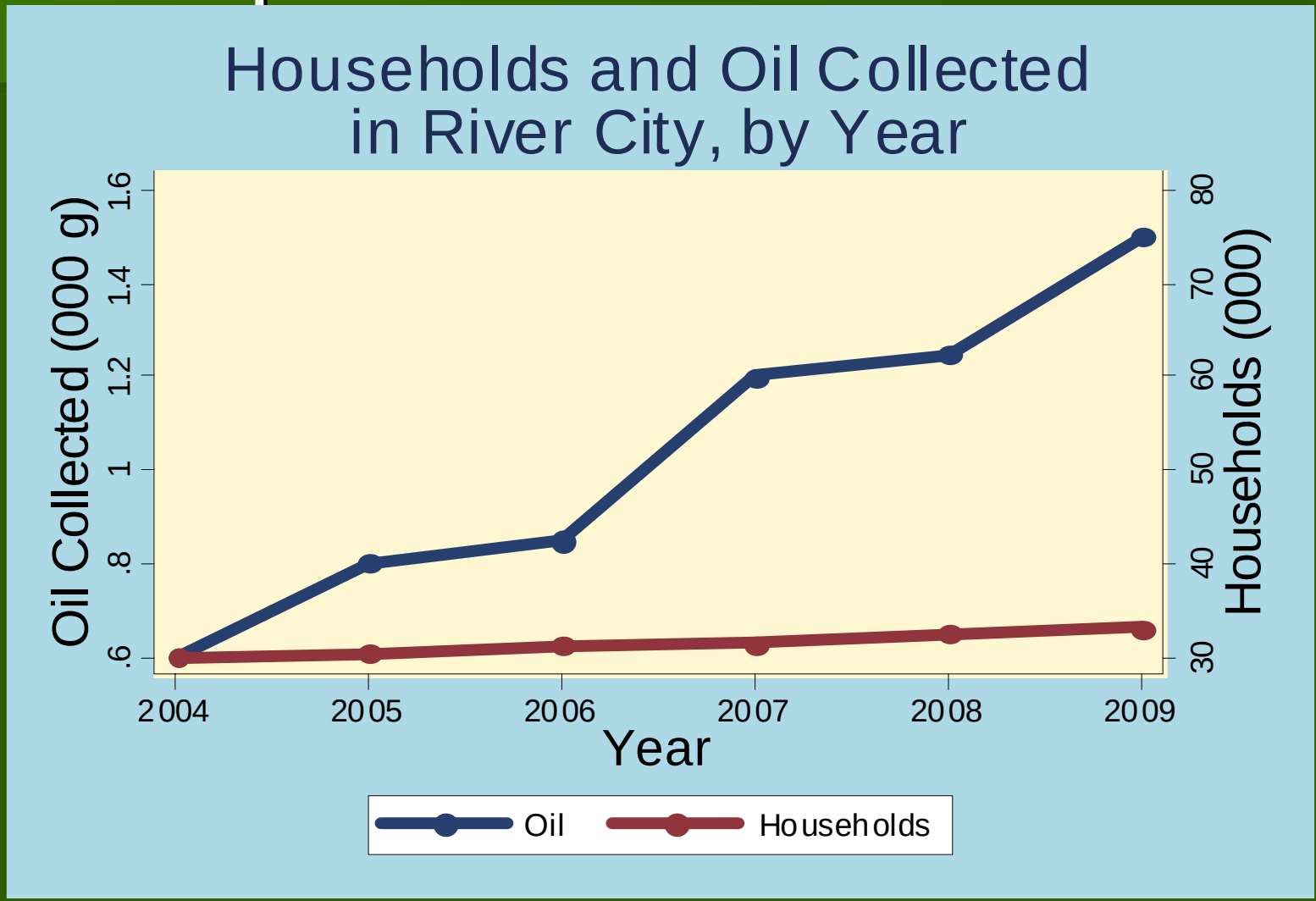
- The previous graph was constructed by simply plotting the two quantities—number of households and gallons of oil collected—over time on the same graph.
- It doesn’t work because the software automatically adjusts the vertical axes to the change over time in each quantity, when we actually want to compare rates of change.

Trend is Poor: Households Up More Than Oil



- The previous graph works. Here's the method:
  - The quantity that increased most over time was number of households, from 30,000 to 33,000, or 10%
  - So the lefthand vertical axis, for gallons of oil collected, was also set to a 10% increase, from 10,000 to 11,000 gallons
  - Now we see clearly that oil collections grew more slowly than the number of households
  - More oil was collected over time, but collections still fell behind population growth

Trend Is Good: Oil Up More Than Households



- This graph works too. In this example, oil collections grew from 600 to 1,600 gallons, or 2.5 times
- So we set the axis for number of households to the same rate of increase: from 30,000 to 75,000 (actually 80,000 to keep the axis labeling at each 10,000 interval)
- Conclusion: oil collection grew much faster than population

3. Evaluation research

- Assessment & monitoring may be enough—survey research may not be necessary
- DO monitor collection over time
- Curbside and centers-based collection programs have very different research needs

Research Needs of Curbside Collection Programs

- 1) BEFORE IMPLEMENTATION
  - Good assessment of the size of the used oil & filter problem & improper disposal is needed to support the adoption of curbside collection
- 2) AFTER IMPLEMENTATION
  - Evaluate DIYer awareness
  - Evaluate DIYer experience with implementation to find & correct problems
  - Monitor collection over time

Research Needs of Centers-Based Collection Programs

- Centers-based programs need more research
  - Centers-based programs will always have participation problems
  - Research to uncover barriers to participation and gauge DIYer attitudes & awareness will continue to be necessary

3. What is evaluation research?

- Research conducted with sensitivity to an organizational (including political) context:
- Goals and Process
  - Examples of goals:
    - Your program: reduce illegal disposal of used oil & filters
    - Landlords: prevent oil changing and oil mess on their properties
    - Tenants: have a convenient way of getting rid of their used oil
    - City council: keep costs down but do the right thing for the environment

3. What is evaluation research? (cont.)

- Examples of process:
  - Bring stakeholders on board for an evaluation so that they buy into the process
  - Locate the potentially supportive leadership of stakeholder groups
  - Assemble a coalition
  - If political change is needed, evaluation is an organizational and political process, not just research!

3. Evaluation research—when surveys might be useful

- Assess impact of a program initiative
  - Did I reach the people I wanted to reach?
  - Do they know what I want them to know?
  - What problems do they experience?
- Guide program development
  - What should we do to collect more?
  - What problems do DIYers experience?
  - Is auditing a better alternative?

3. Evaluation research—problems of surveys in local settings

- Sample size:
  - The statewide survey had to contact 3,800 households in order to get interviews with 761 DIYers including 114 STMs—which was still fewer than needed. This is beyond the reach of local programs.
- What is the population?
- Lack of "containment"
  - When the population & the program do not stand in one-to-one correspondence to each other, in practice
    - Smaller cities in metropolitan areas
    - Cities & surrounding rural areas
    - Oil is generated in one locality but disposed in others
    - With intercept surveys, DIYers may be interviewed in one locality but reside in another nearby community

3. Surveys in local settings (cont.)

- The problem of estimating improper disposal accurately
- The problem of reaching & interviewing STMs
- What can you do when program & population are not “contained”?
  - Combine with adjacent communities
  - Make regional research a county responsibility

Conclusions (1)

- Survey research on improper disposal is prohibitive for all but the largest jurisdictions
- Especially for smaller, less contained cities
- Monitoring over time using census-based estimates is more accurate, more relevant, and much cheaper

Conclusions (2)

- But monitoring runs into the containment problem, too. Again:
  - Combine with adjacent communities
  - Research should be a county responsibility for all but the largest cities
- Avoid most research altogether once curbside collection has been implemented