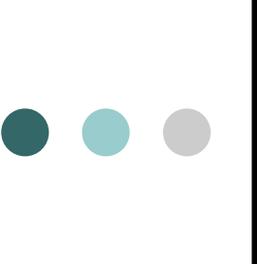




# How can Michigan measure progress toward the 50% MSW utilization goal in the Solid Waste Policy:

A Presentation to the Solid Waste Advisory Committee by the Waste and Hazardous Materials Division

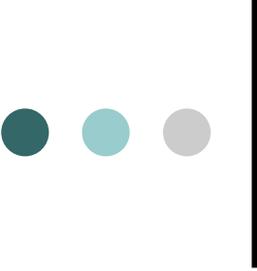
June 6, 2008



# Michigan's Solid Waste Policy States:

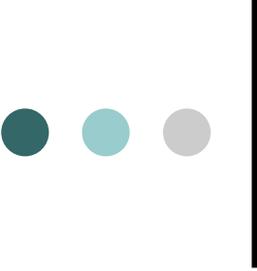
***To encourage more waste utilization, Michigan should:***

- *Strive to make continuous improvement toward full utilization of all solid waste streams, and as a step toward that end, establish a goal of utilizing 50 percent of Michigan's municipal solid waste (MSW) stream by 2015.*
- *Ensure that all Michigan citizens have convenient access to residential recycling programs by 2012.*



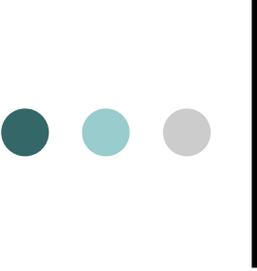
# Definition of MSW from Solid Waste Policy:

- *MSW - otherwise known as trash or garbage - consists of everyday items such as product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, appliances, and batteries. Not included are materials that also may be disposed of in landfills but are not generally considered MSW, such as construction and demolition debris, municipal wastewater treatment sludges, and nonhazardous industrial wastes (U.S. Environmental Protection Agency, Municipal Solid Waste in the United States: 2005 Facts and Figures, Executive Summary, October 18, 2006).*



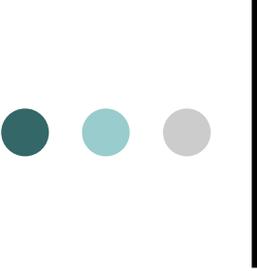
How do we determine the percent utilization rate?

$$\% \text{ utilized} = \frac{\text{total amount utilized}}{\text{total amount generated}} \times 100$$



# What is Utilization?

- For the purposes of measurement utilization includes:
  - composting
  - recycling
  - energy recovery
- Does not include waste reduction and reuse at this time



Generation = amount disposed + amount utilized

### Example Generation Rate:

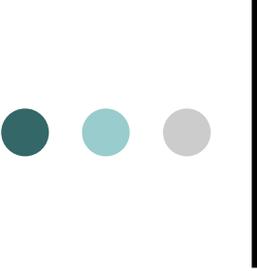
Total amount MSW composted  
Total amount MSW recycled  
Total amount utilized for energy recovery

Plus

Total amount incinerated (minus ash)  
Total amount landfilled (including incinerator ash)  
Total amount backyard burned or buried

### Measurement Issues:

- Double counting
- Recycling Reject Rate
- Energy Recovery
- Units of measurement (tons or cubic yards)



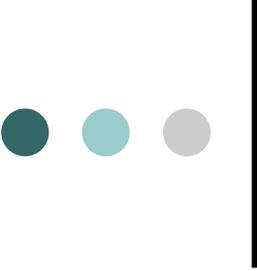
# What is currently measured?

- Annual Solid Waste Receipt Report: how much total waste is disposed in Michigan landfills
- Estimated amount of waste disposed in other states
- Incinerator data reported to AQD (ash can be determined from SW Receipt Report)
- Bottle Deposit refund information: amount of refunds returned
- Data on amount of yard clippings composted



# Generation = amount + amount utilized      disposed

Side of equation	Category	Data currently available	Most Recent data (tons)	What is missing?
Amount utilized	Total Amount MSW composted	Yard Clippings at registered composting facilities	208,008 *	Amount of yard clippings composted at landfills and processing plants, Amount of other MSW composted
Amount utilized	Total Amount MSW recycled	Bottle deposit refund information	212,195	Amount of recycled material collected through curbside and drop-off programs
Amount utilized	Total Amount used for energy recovery	None	?	Amount of MSW actually utilized for energy recovery
Amount disposed	Total amount incinerated (minus ash)	Incinerator data reported to AQD	877,190 minus 213,716 ash = 663,474	Percentage of the incinerated waste that was utilized
Amount disposed	Total amount landfilled (including incinerator ash)	Annual Solid Waste receipt report	14,589,082	Amount of MSW only, not including Type III waste. Waste disposed in other states.
Amount disposed	Total amount backyard burned or buried	None	?	Total amount of backyard burned or buried



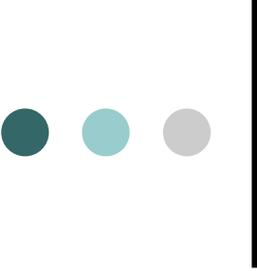
# Problems with what is currently measured

- Landfill waste receipt report is all waste (not just Type II). It is difficult to ascertain the amount of MSW disposed from the data we currently collect
- Current waste measurement scheme doesn't focus on residential/commercial waste, so it doesn't line up with 50% policy goal
- Data on Michigan waste disposed in other states would come from the data the other state collects (if collected)

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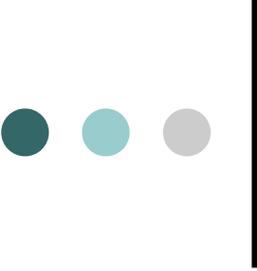
Any other sources of information already available?





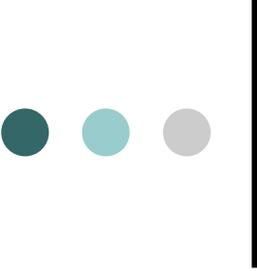
# How can Michigan ensure the collection of the recycling data?

- Legislative Approach
  - Producer responsibility data collection (Ontario model)
  - Statewide funding mechanism e.g. solid waste surcharge, penny plan to fund and require reporting
- Voluntary Approach
  - Ask for but not compel
  - Would not get all available data
  - Fund person to repeat 2001 Recycling Study



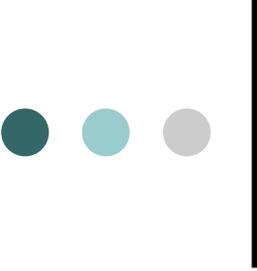
# How do we compel entities to provide data without a dedicated funding source?

- Legislative Changes to Solid Waste Planning Process
  - Require counties to choose a data collection method and submit reports
  - 50% goal and how county will meet must be included in the County Plan
- Use existing tools to fund data collection at the local (county) level
  - Hauler licensing-require haulers to report
  - PA 69 of 2005
- Administrative Rules (10% processing rule)



# Data collection through the planning process

- Would require amendments to planning bills
- Create different planning template options that a county could select based on county's financial situation and degree of effort/involvement in the process.



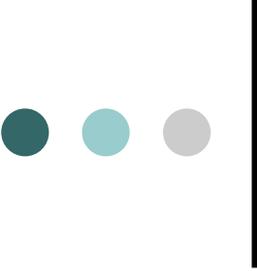
# Three possible planning template options

- Option 1: Low/No cost data collection-low level of effort at local level
  - Hauler Licensing Program- haulers report through licensing process
- Option 2: Some money available for data collection-moderate level of effort at local level
  - PA 69 of 2005 or equivalent funding mechanism
- Option 3: Have funding mechanism/staff in place-high level of effort at local level-receives benefits for taking responsibility for data collection
  - Has fully engaged program, state offers incentives

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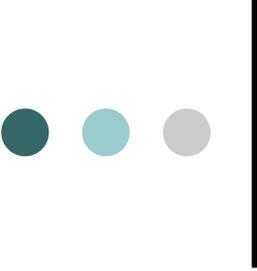
# Other ideas through Planning process?





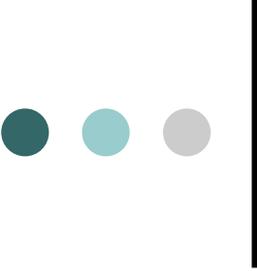
# Data collection through Existing Rule

- Enforce Processing Plant Rule
  - Require MRFs to report material collected or keep track of material collection in operating record



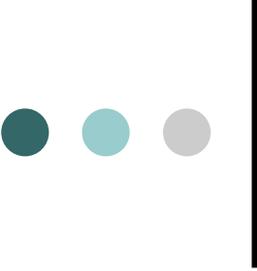
# What tools can be used to track this data?

- Design our own database
- Adopt existing state system
  - California or Minnesota model
- Re-TRAC or other privately developed waste utilization tracking software



# Design our own database

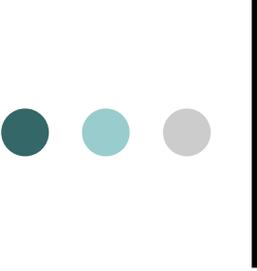
- Costly and time consuming
- Would be duplicating previous states' efforts
- A statewide database would require counties or MRFs to report to the state
  - Proprietary information would need to be shared.



# Adopt Existing State System

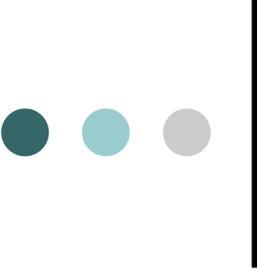
- California System

- Could be given to state
- Would require extensive software programming
- Would require reporting to the State
- State would enter the data
  - Could have online data entry



# Re-TRAC or other web based software/database

- Benefits to web-based program:
  - Users enter own data
  - Automatic software updates/upgrades
  - Data is released in aggregate form to protect proprietary information
- Cost of Re-TRAC
  - 3 Year program (setup and annual fee) = \$180,956
  - 5 Year program = \$267,434
- Unaware of any other web based database

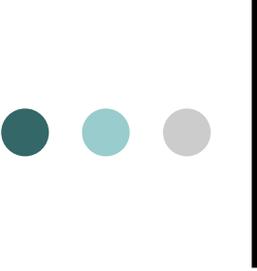


# How could Michigan fund the development or purchase of waste utilization tracking software?

- Legislative Approach
  - Increase solid waste surcharge
  - Penny Plan
- Voluntary Approach
  - Example: Ask 8 private companies and/or municipalities for \$25K donation

● ● ● | Any other options out there?





# What next?

- Out of the options available, which is has the best chance of success?
- Who will do what by when?