

# Status, History and Effects of Material Disposal Bans

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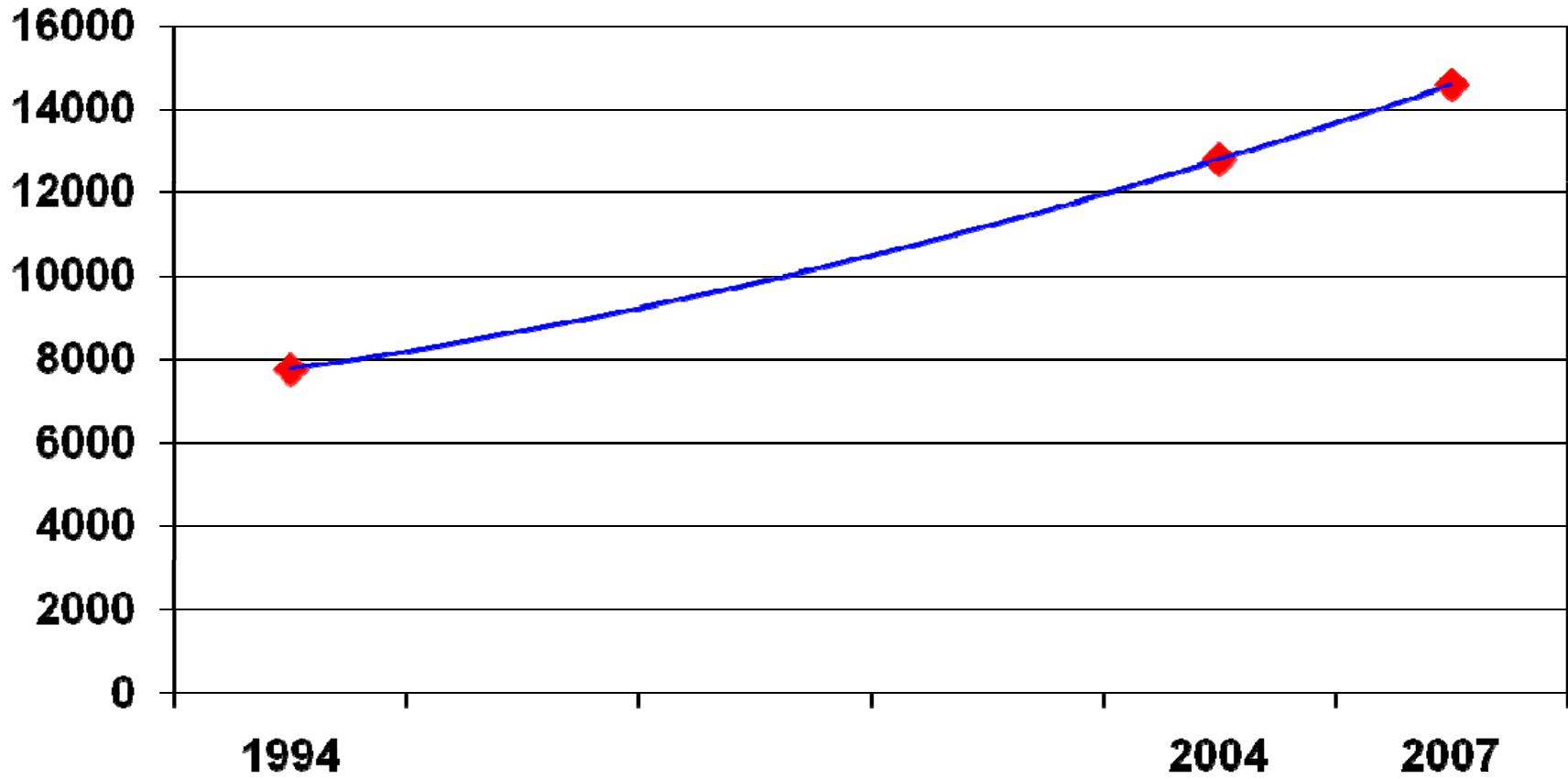
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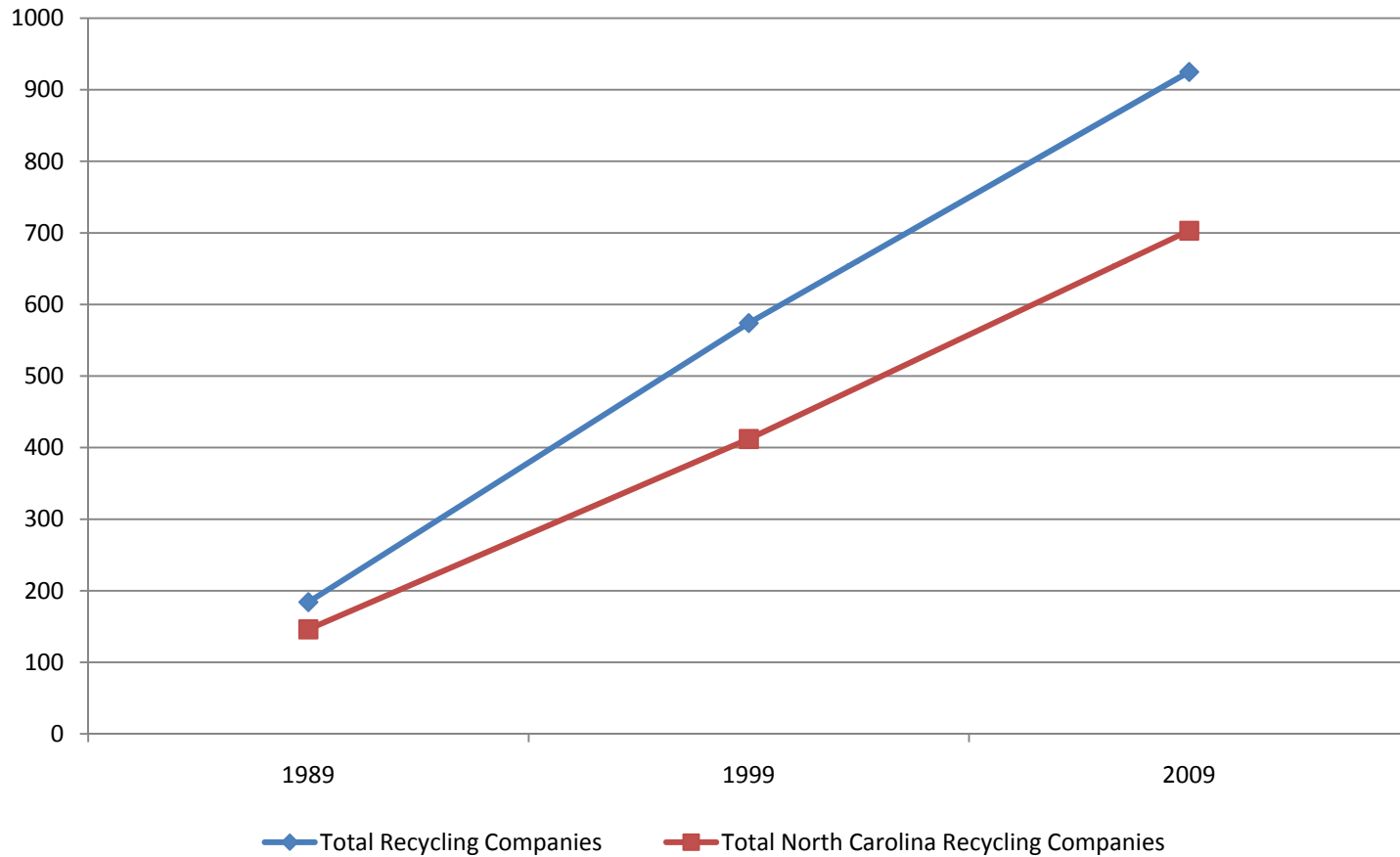
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# Green Jobs: Continued Growth of North Carolina's Recycling Economy

Number of Recycling Jobs in NC



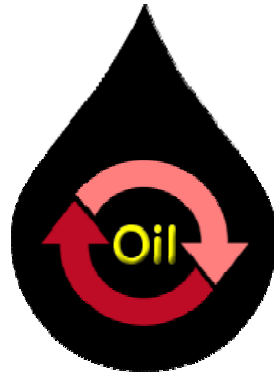
# Companies Listed in North Carolina's Recycling Markets Directory



# Recycling Essential to NC Manufacturers: Examples of Products Made in NC



# Which of these things are “waste?”



# Short History of Disposal Bans

- Senate Bill 111 in 1989: first disposal bans on lead acid batteries, used oil, tires, yard waste, and white goods in G.S. 130A-309.10 (f)
- Aluminum can ban and antifreeze added by Senate Bill 59 in 1993 (can ban effective in 1994).
- Senate Bill 59 also added:

“The accidental or occasional disposal of small amounts of prohibited solid waste by landfill or incineration shall not be construed as a violation of subsections (f) or (f1) of this section.”





# History of Disposal Bans, cont.

- In 2005, Representative Joe Hackney sponsored H1465 and H1518:
  - H1518 required certain ABC permit holders to recycle beverage containers and included a disposal ban on those containers – effective 1/1/08
  - H1465 banned the disposal of wooden pallets, oil filters, oyster shells, and “rigid plastic containers,” defined to mean bottles, effective 10/1/2009
  - Oyster shells ban subsequently accelerated to 1/1/2007.

# Key Details on H1465 and More Ban History





- Wooden pallets entering C&D landfills exempt from ban – however, only C&D waste can enter C&D landfills, so only C&D generated pallets are exempt.
- Plastic bottle ban excludes motor oil and pesticide bottles.
- In 2007, S1492 banned computer equipment from disposal, effective 1/1/2012.
- In 2008, H819 added televisions to the bans and made the date for both TVs and computers: **1/1/2011**
- Bans becoming more “commodity” based.

# The “Commodity” case for the 2009 Bans – Oil Filters

-  Steel and oil in filters highly marketable with long-standing end-uses.
-  Every recycler of oil also recycles filters.
-  Filter recycling is a competitive market place in North Carolina.
-  Additional case for filters: residual oil in filters
  - From 2 to 8 oz of oil in a discarded filter
  - If only about half of the 14 million filters generated are being recycled, as much as 250,000 gallons of oil are entering NC landfills.

# Making the “Commodity” case

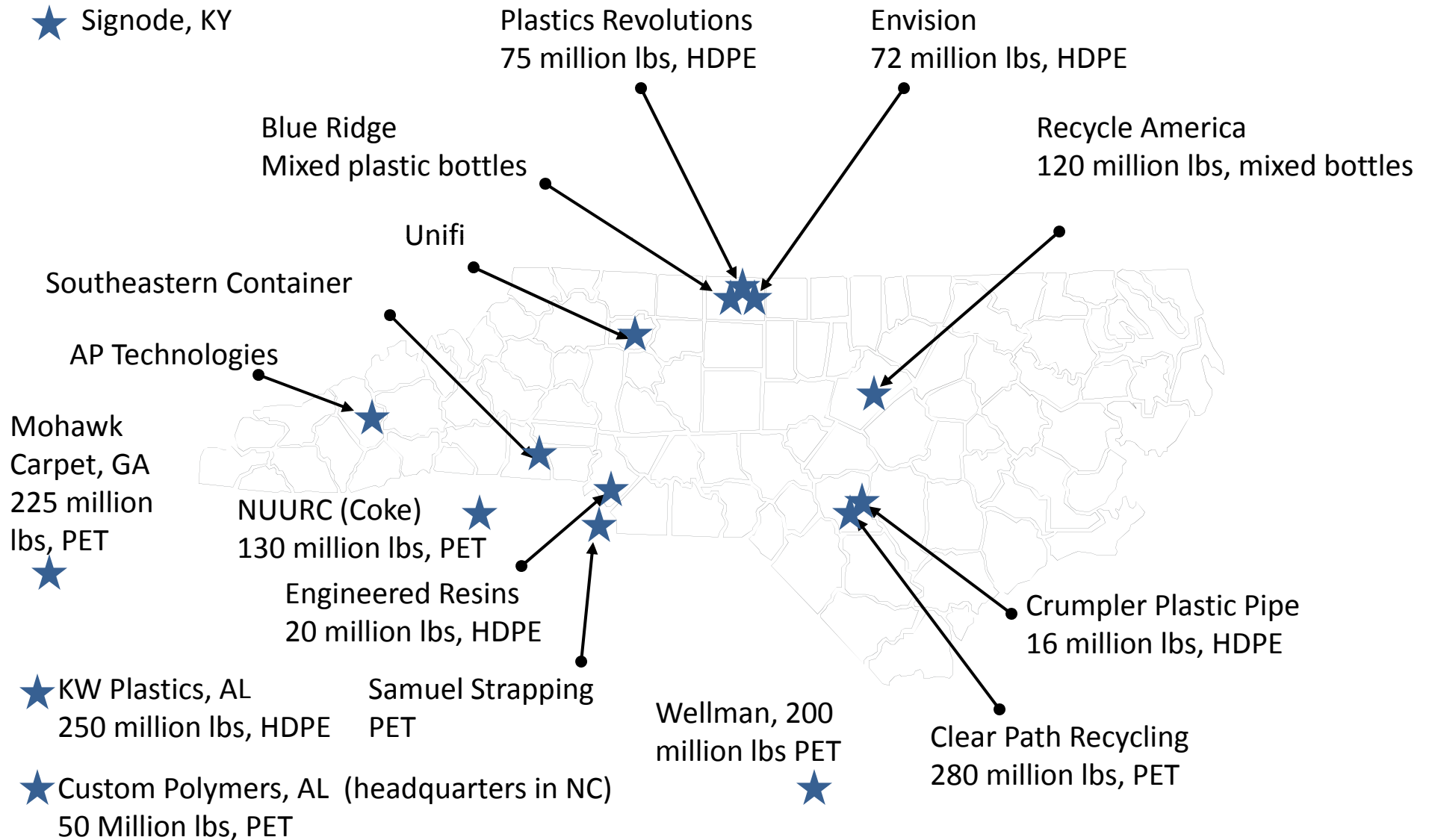
## Wooden Pallets Disposal Ban

-  Wooden pallets have a solid hierarchy of end uses: reuse, repair, mulch, compost, fuel, and some value-added products.
-  77 different pallet markets in the NC Directory of Markets for Recyclable Materials.
-  NC State study and DPPEA jobs studies show pallet recycling employs over 1,000 people statewide.
-  Additional companies depend on pallet feedstock: commercial composters, mulch manufacturers, and industrial burners.

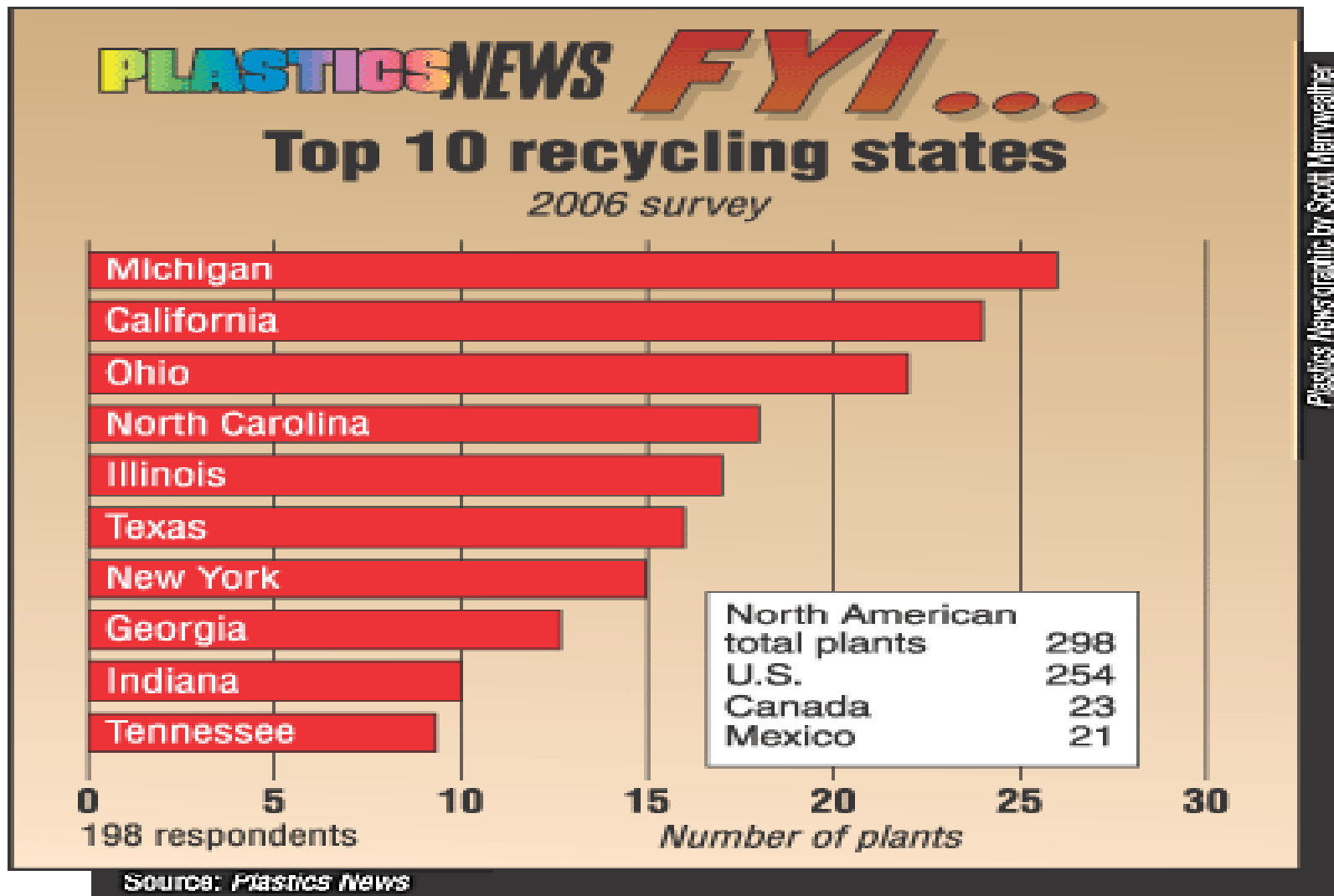
# Making the “Commodity” case for the Plastic Bottle Disposal Ban

- Plastic bottle demand rising worldwide.
  - Broad range of product applications.
  - Domestic capacity fighting with China for supply.
  - Long-term rise in petroleum/natural gas costs will keep driving reliance on PCR (post-consumer resin).
- Southeast particularly rich in bottle plastic processing and end-use.
- Carolinas becoming “ground zero” for PET recycling in U.S.

# Snapshot of In-state and Nearby Plastics Bottle Processing and End-use Capacity



# North Carolina a Leader in Plastics Recycling



# Five Main Options for Local Government Action on the Bans

1. Boost participation in your existing programs.
2. Start or expand recycling services for the banned materials.
3. Conduct active education and information campaign.
4. Act as a resource to help generators understand their recycling options.
5. For owners/operators of disposal facilities: work with facility users to ensure diversion of banned materials prior to disposal.

# General Local Government Experience with Recent Bans

- Drop-off centers receiving more volume.
- Increased tonnages in curbside programs.
- Processing centers receiving more material.
- General increase in public interest and involvement in recycling.

# Survey Results on Local Government Experience with Bans:

- Survey of local governments currently underway.
- 92 percent of survey respondents saw an increase in plastic bottle collection
- 2 out of 5 respondents said the increase was 30 percent or more.
- 40 percent of respondents noted an increase in oil filter and pallet collections

# Local Government Programmatic Response to Bans

Did you initiate or expand any programs? (check all that apply)

Answer Options	Response Percent	Response Count
Expanded drop-off sites	24.4%	21
Added new drop-off sites	4.7%	4
Added or expanded curbside recycling pickup	16.3%	14
Started recycling at events	16.3%	14
Started school recycling programs	14.0%	12
Added or expanded plastic bottle collections	32.6%	28
Added or expanded oil filter collections	26.7%	23
Added or expanded wooden pallet collections	23.3%	20
Started or expanded commercial or industrial recycling collections programs	9.3%	8
Started or expanded recycling at parks, recreation facilities or other public places	29.1%	25
Partnered with other organizations	12.8%	11
Other (please specify)	18.6%	16

# Local Government Education of Citizens

How did you make citizens and waste generators in your community aware of the disposal bans? (check all that apply)

Answer Options	Response Percent	Response Count
Mailings to households and waste generators	30.9%	34
Website	63.6%	70
Utility or bill stuffers	29.1%	32
Public presentations	29.1%	32
Communication through business groups and community organizations (e.g., chambers of commerce, rotary clubs, environmental groups, etc)	28.2%	31
Press releases and news stories	63.6%	70
Word of mouth	63.6%	70
Other (please specify)	29.1%	32

# Public and Hauler Reaction to the Bans

**Did the bans increase public interest in recycling in your community?**

<b>Answer Options</b>	<b>Response Percent</b>
Yes	88.3%
No	11.7%

**How did private haulers in your community react to the disposal bans?**

<b>Answer Options</b>	<b>Yes</b>	<b>No</b>
Haulers informed customers of the disposal bans	66	19
Haulers responded to customer demands for recycling services	50	27
Haulers made adequate additional efforts to ensure diversion of banned materials	47	31

# Actions Taken By Local Government Landfill and Transfer Stations

If your community operates a transfer station or landfill, which of the following actions did you take in regard to the disposal bans? (check all that apply)

Answer Options	Response Percent	Response Count
Updated facility signage to reflect the new disposal bans	50.0%	21
Communicated directly to haulers and other disposal facility users about the bans	81.0%	34
Modified waste screening procedures and training to look out for banned materials	50.0%	21
Established a drop-off service on or near the facility property to give facility users an alternative to the disposal of banned materials	35.7%	15
Conducted outreach directly to generators on the importance of recycling the banned materials	28.6%	12
Other (please specify)		8

# Electronics

- Disposal Bans on Computer Equipment and Televisions effective 1/1/2011.
- Many counties already running electronics collection programs; others pending.
- Legislation pending to implement producer responsibility and provide financial assistance to county programs.
- NCACC played major role on this issue in 2009 and will be needed again in 2010.

# Material Example: Copper for the Future



## Choice # 1: Copper Mine

- Yield: 12 lbs/ton
- Main Industrial Processes include Mining + Smelting
- No Copper Mines in NC



## Choice # 2: Electronics Processor

- Yield: 100 lbs/ton
- Main Industrial Processes include Dismantling + Smelting
- Multiple Processors in NC

# Enforcement

- Division of Waste Management is the enforcement agency for solid waste laws and regulations.
- DWM's focus is on landfills and transfer stations through routine inspections of those facilities.
- DWM did send notification of the bans to all disposal facilities.
- No enforcement cases to date.
- Some DWM communication with haulers.
- Some landfill operators have established their own penalty systems.

THANK YOU!

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