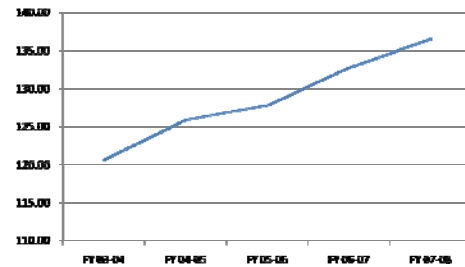


NC Recycling Picture Overview

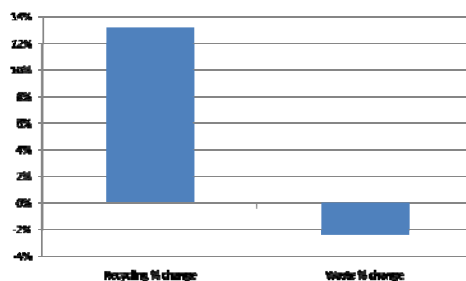
- Local government recycling tonnages continue to rise.
- Recycling contributing to strength of state economy.
- Global economic crisis abruptly ended the strong 5 year recycling price trend in late 2008.
- Near-term pace of recycling growth depends on:
 - improvement in prices
 - expansion of community programs
 - effect of new material bans.

Per Capita Increase in Recycling through Local Government Programs

(in lbs. per capita)



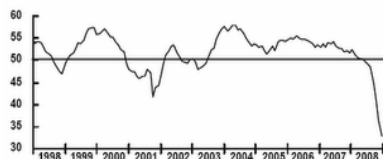
Percentage Change in Per Capita Disposal vs. Local Government Recycling, FY04 – FY08



Economic Crisis Affecting Recycling Material Prices

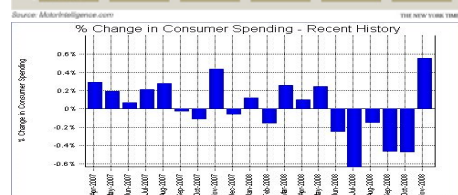
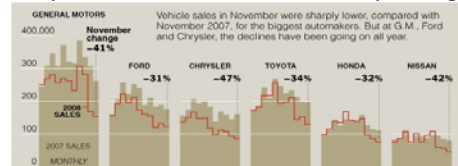
- As a commodity business, recycling wholly dependent on manufacturing demand.
- Auto, housing, and consumer product sectors especially important for recyclables.
- Chinese manufacturing demand also very important for recyclables.
- Collapse of manufacturing has lowered prices for all commodities, including recyclables.

Global Manufacturing Collapse

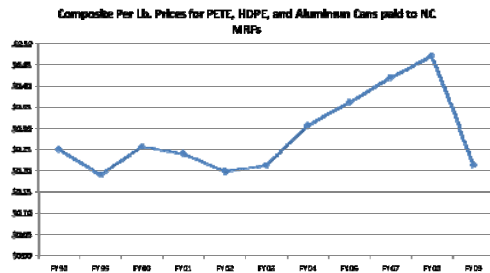


- Chinese overseas shipments fell in November for the first time in seven years and Chinese industrial output grew by the smallest margin in almost a decade.

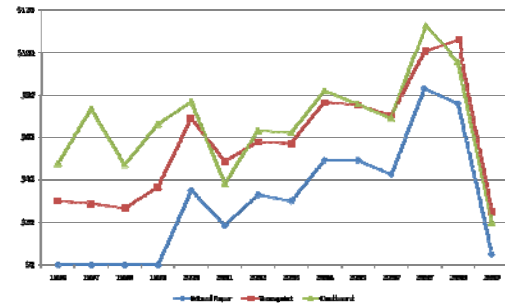
Drop in Auto Sales and Consumer Spending



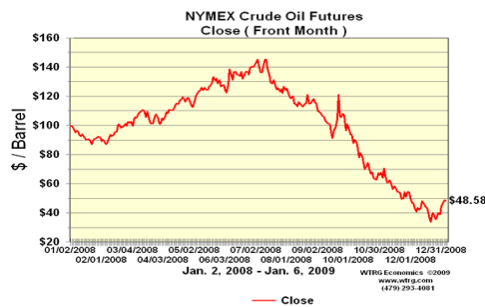
Container Material Prices Received by NC MRFs, FY 98 through half of FY 09



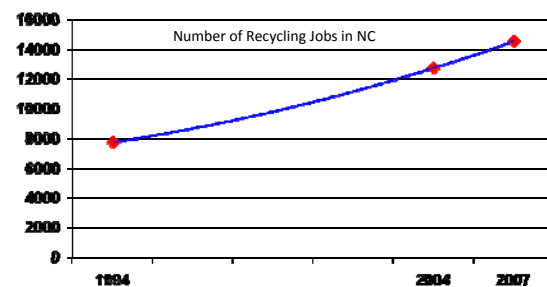
Paper Mill Prices, 1996-2009



Price Falling for Other Commodities – Example: Oil



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



Examples of companies who have added employees since 2004

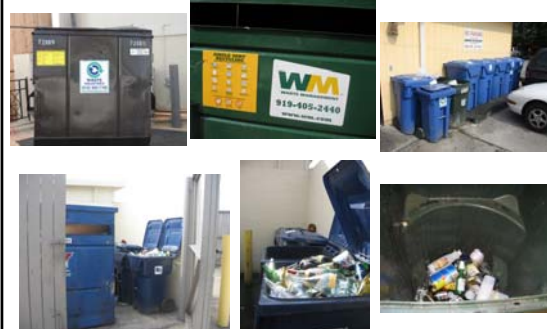
Company	2004 jobs	2008 jobs	% increase
ONP-based insulation manufacturer	15	40	167%
Processor (MRF) in Triangle	15	43	187%
Electronics recyclers in Charlotte, Triad and Triangle	35	84	140%
Rubber processor in western NC	12	38	217%
Processor (MRF) in central NC	4	20	400%
Processor (MRF) in western NC	23	34	48%



ABC Program Success

- Estimated Compliance:
 - Over 5,000 bars and restaurants recycling
 - Compliance rate probably around 70 percent
 - Average cost of compliance ~\$100/month
- NC glass manufacturers receiving new supplies of clean “cullet.”
- Estimated Tonnage Collected: 33,750 tons

Images of ABC Compliance

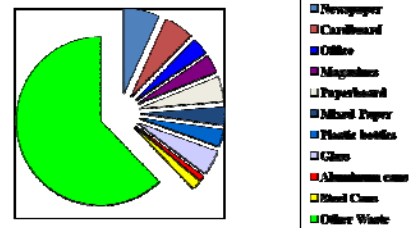


Progress in Curbside Recycling

- Number of curbside programs decreased, but number of households served by curbside increased by 80,000 (about 6%).
 - Expected to climb again next year
- Examples of curbside success:
 - New programs in Fayetteville, Mooresville.
 - Modernized programs in Wake Forest, Clayton, Archdale, Fuquay-Varina.
 - Rural subscription programs growing.

Household Recycling

- Estimated lbs of solid waste generated per household: 1,880
- Estimate recyclable lbs. per household: 745 (40%)
- Average NC program collection: 226 lbs per household served



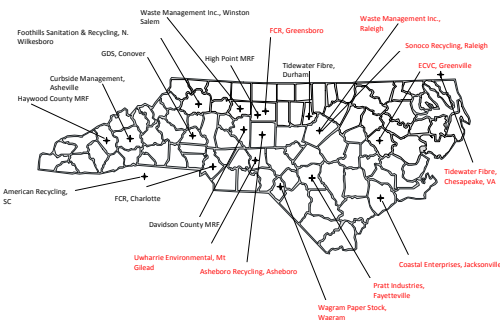
Conversion to Carts

- Single stream MRFs allow commingling.
- Carts give customers capacity to match their available materials.
- Communities converting to carts see increases in participation and recovery – 50% in most cases.
- Example - Wake Forest:
 - Converted to carts in 2005
 - Participation up from 60 to 80%
 - Recovery per household up 69%
 - Recovery rate at about 400 lbs/hh served



Material Recovery Facilities Serving NC

(single stream facilities in red)



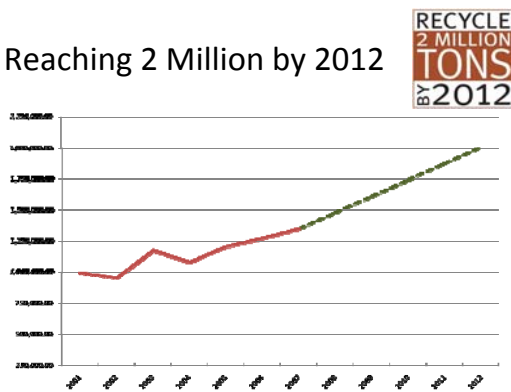
Upcoming Disposal Bans

- Pallets – Oct 1, 2009
 - Pallets generated as C&D waste may go into CDLFs
- Rigid Plastic Bottles – October 1, 2009
 - Specifically excludes motor oil bottles
- Used Motor Oil Filters – Oct 1, 2009
- Televisions – Jan 1, 2011
- Computer Equipment – Jan 1, 2012

Main Near-Term Challenges for Recycling

- Weak economy will slow down expansions of local programs.
- Many communities may not invest their disposal tax revenues in recycling.
- Mass municipal conversion to curbside carts will be expensive.
- Recycling market prices will rebound slowly and rely on recovery of overall economy.

Reaching 2 Million by 2012



Plastic Bag Issues

- Plastic bags are recycled at a low rate, and generally “down-cycled” into plastic lumber.
- Plastic bags contribute to litter and are a major source of blown trash at landfills.
- There are some environmental advantages to plastic bags over paper and no clear-cut overall advantage to either.

Plastic Bag Use

- Specific data on plastic bag use difficult to find.
- EPA’s data combines plastic bags, sacks, and wraps:
 - 380 billion used in U.S. each year
 - Approximate NC Share: 11.4 billion
- Some estimates of 84 to 100 billion plastics bags used per year in U.S. – NC share would be about 2.5 to 3 billion.
- Plastic bag tonnage in NC as much as 30,000 tons per year, possibly much higher.
- Estimated EPA recovery rate is 9%; other estimates as low as 1 to 2%.

Policy Activity on Plastic Bags

- Activity on local, state, and international levels.
- Partial or overall bans: 6 in African countries, 3 in Asia, 2 in Europe, and 6 local governments in U.S.
- Taxes placed on bag use in 6 countries around the world and in Seattle and Toronto.
 - Ireland example: 25 cent tax led to 94% reduction in bag use.
- Some retailers also active on plastic bag issues:
 - Many larger grocers and retailers offer recycling and sell reusable bags.
 - IKEA and Whole Foods have stopped using plastic bags.
 - Wal-Mart has goal of reducing bag use by 1/3rd – will cut 135 million lbs of plastic waste/year.
- Plastic bags will continue to be a focus of policy and corporate activity.

Update on Fluorescent Lights

- Additional studies confirm that using compact fluorescents (CFLs) reduces mercury emissions.
- CFLs continue to gain market share – estimated sales now about 9 million/year in NC.
- New recycling options available through Home Depot and Waste Management, Inc.
- New collection program in Watauga County offers good model for other communities.
- New State contract will make fluorescent light recycling much less costly for state and local agencies.

DENR Legislative Recommendations on Fluorescent Lights and Thermostats

- Require all state agencies, including universities, community colleges, and schools to recycle spent fluorescent lights and mercury thermostats and to submit a one-time report on their efforts by May 1, 2010.
- Ban all mercury containing products, including fluorescent lights and mercury thermostats, from disposal in **unlined** landfills, effective July 1, 2009.
- Require all demolition contractors to remove all fluorescent lights and mercury thermostats before a building is demolished, effective July 1, 2009.