

Update on Degradable Plastic Study

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Scope and Status of Study

- As instructed by Senate Bill 229, DENR will:
 - “study and evaluate degradable plastics products and their potential to contaminate recycled plastic feedstocks”
 - “develop and recommend standards for degradable plastic products, including labeling requirements and education and outreach programs, to prevent contamination of recycled plastic feedstocks”
- Activities to date:
 - Initiated research on use of degradable plastics
 - Initiated outreach to NC users of recycled plastic feedstocks
 - Identified major issues to address in the study

Basic Kinds of Plastic

- Consumer plastics
 - Plastic bottles
 - Dominated by PET (#1) and (#2)
 - Other plastic containers
 - Plastic bags and film
- Durable goods plastics
 - Electronics, appliances, carpet
- Other plastics – e.g., agricultural plastics, totes, barrels, etc.

Focus on PET (#1) and HDPE (#2) bottles

- North Carolina home to some of the nation's most important processors and users of plastic bottle resin.
- Concerns about how degradables will affect these companies and local recycling programs.
- Plastic bottle recycling in NC supported by disposal ban in G.S. 130A-309.10(f)(11)



Products made from #1 and #2 Recycled Plastic Feedstocks

- New bottles
- Clothing and Textiles
- Carpet
- Automotive parts
- Building and gardening products
- Industrial strapping
- Consumer packaging



Rising Use/Marketing of Degradable Plastics

- Recent development of new types of degradable plastics, intended to break down in landfills or when exposed to natural elements.
- Degradables being used in a variety of products:
 - Bottles (mostly small-scale bottled water uses)
 - Other containers
 - Films/bags
 - Foodservice plastics –focus on “compostable” as well as “degradable”

Types of Degradable Plastics

- Plastic products with additives that promote or facilitate breaking down of the product.
 - E.g., a PET bottle with additives that break apart the PET into smaller pieces over time.
- Plastics that themselves break down over time.
 - E.g., bio, starch-based food plastic ware that will decompose in the right conditions

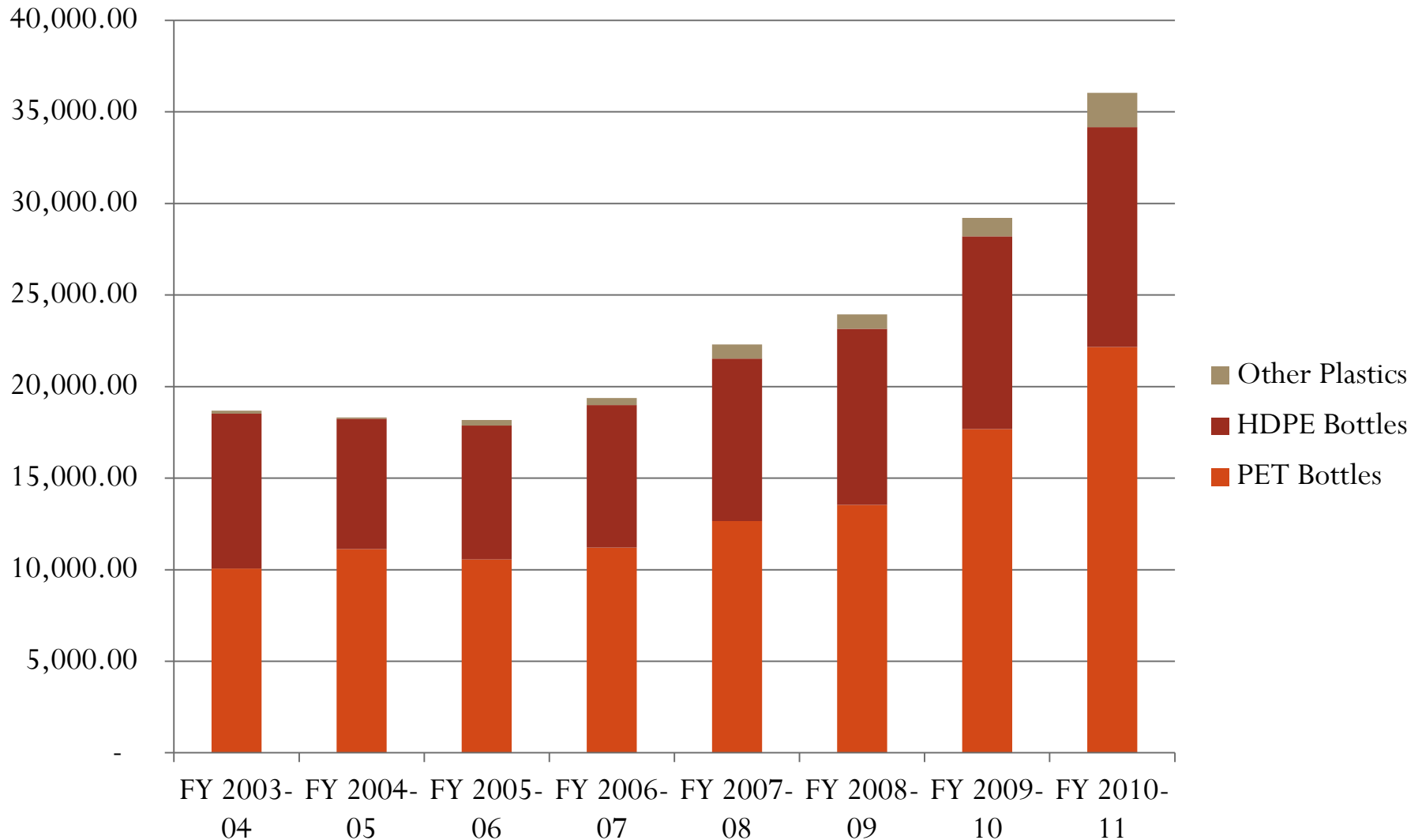
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- **Different Product:** Coke's PLANT bottle and work by others (P&G, Heinz, Pepsi) to convert plant-based material to make ethylene gas and then PET.
  - Recycles conventionally along with other PET

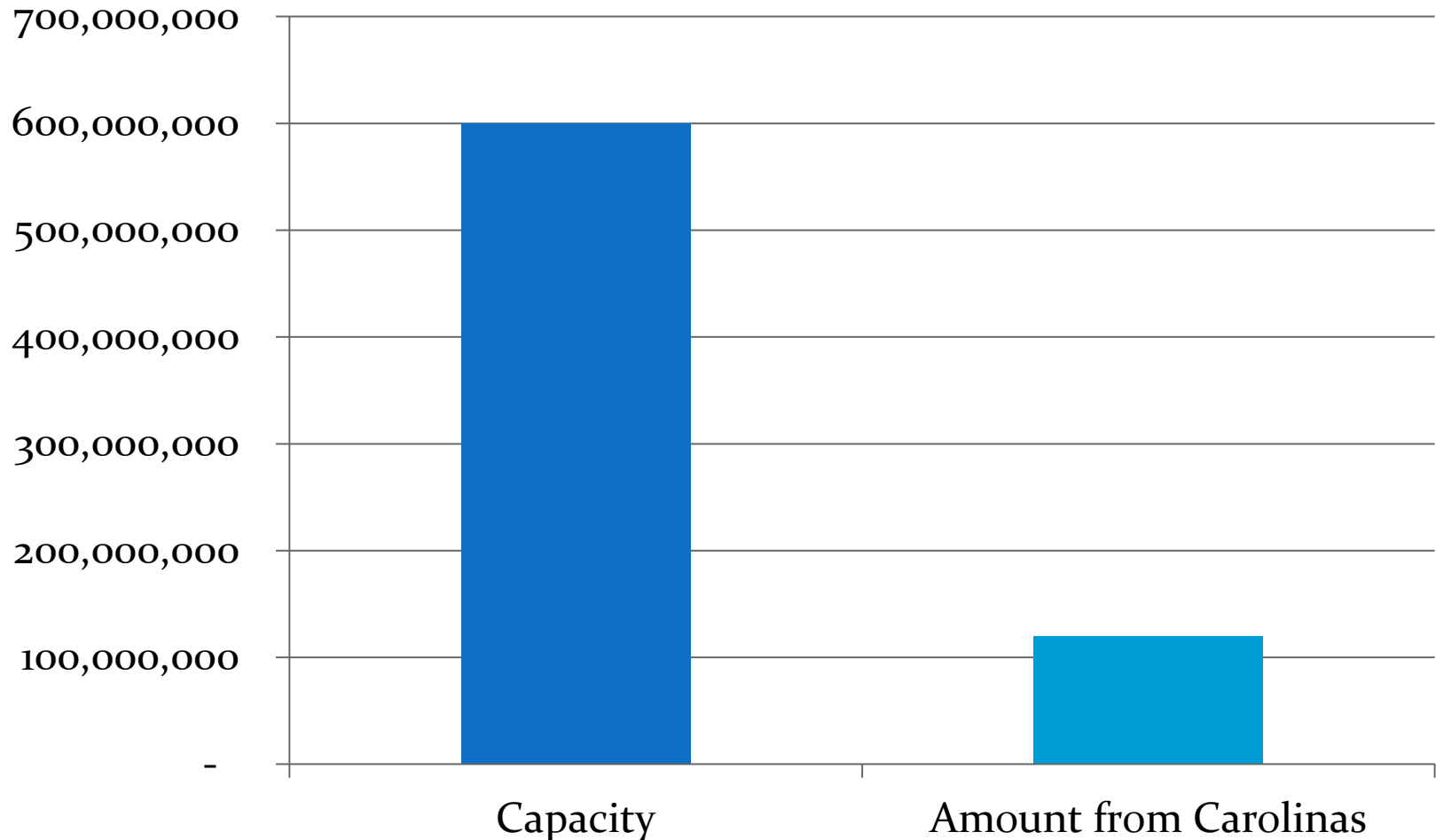
# Issues Study Will Seek to Address

- More details on use of degradables – kinds of products that may be appearing or coming into NC
- Effects of degradable plastics on:
  - North Carolina's plastic bottle recycling industry
  - North Carolina's overall efforts to recycle plastics
  - Landfills
  - Litter
- Possible use or application of industry and federal standards and guidelines – e.g., FTC, ASTM – to North Carolina's situation.
- Public understanding - need for clear and simple information for consumers about what they should do with a plastic product after use.

# Recovery of Plastic Bottles in NC by Local Government Programs



# Carolinas Plastic Bottle Recycling Capacity Vs Local Supply (in lbs.)



# CONTACT INFORMATION

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