



Dream To Be Green



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<https://inside.ncdot.gov/Business/Pages/NCDOT-3R-Program.aspx>

Why Recycle



Supports

NCDOT Missions and Goals

“Connecting people and places safely and efficiently, with accountability and environmental sensitivity to enhance the economy, health and well-being of North Carolina.

Why Recycle



- ❖ **It's the Law-G.S. 130A-309.10**
- ❖ **It's a Governor Executive Order- #156**
- ❖ **It's just good common sense, Why Not?**

Benefits

- **Helps create jobs** in North Carolina for collections, processing and manufacturing recycled materials
- **Generates revenue** from the sale of unwanted copper, scrap steel, aluminum and stainless steel
- **Saves money** by avoiding paying landfill disposal fees
- **Saves** valuable landfill space
- **Saves** Energy/Water
- **Conserves** natural resources
- **Lessons** our carbon footprint on the planet
- **Publically** acknowledges NCDOT Environmental Stewardship efforts



Recycle Results

2012-2013 Waste Material	Tonnage
Paper: newspaper, magazines, cardboard, office paper, telephone books, hardback books, etc.	686 tons
Metal: aluminum cans, steel cans, scrap metal, white goods, etc.	3011 tons
Glass containers: clear, brown, green, and mixed glass	10 tons
Plastic: PETE #1, HDPE #2, LDPE #4, mixed plastic, etc.	33 tons
Commingled containers: single stream collection of aluminum and steel cans, glass and plastic	64 tons
Electronics: monitors, computers, printers, copiers ,televisions, etc.	67 tons
Organic materials: wooden pallets, other wood, yard waste,	1299 tons
Other materials: lead acid batteries, motor oil, white goods , etc.	653 tons
Grand Total	5823 tons

Recycle Results



2012 2013 Waste Material	Revenue Generated
Recyclable Oil	\$131,860
Recyclable Metal-Non Aluminum	\$433,881
Recyclable Batteries	\$86,207
Recyclable Aluminum	\$81,655.80
Recyclable Cardboard	\$1143
Total	\$734,746



HIGHWAY CONSTRUCTION AND MAINTENANCE PROJECTS

- The Department has utilized crushed concrete as an Aggregate Base Course (ABC) since the mid 1990's with success.. One project to note is the I-40/440 Fortify Project, fortifyNC.com. The contractor, Granite Construction Co. is crushing, blending and stockpiling the existing concrete asphalt and reusing it on the project as ABC on this 11.5-mile stretch of roadway. To date, the Fortify project has diverted 54,142 tons of concrete from the landfill.
- Additionally, the Department is actively seeking a pilot project on which to test crumb rubber in an asphalt application. Crumb rubber is derived from post-consumer automobile tires and manufactures' waste.
- NCDOT continues to encourage the use of recycled products in highway construction projects, such as guardrail offset blocks and flexible delineator posts. Glass beads are used for retro-reflective pavement markings and are manufactured from 100% recycled glass.

HIGHWAY CONSTRUCTION AND MAINTENANCE PROJECTS

North Carolina Department of Transportation
 Recycled Products & Solid Waste Utilization in Construction & Maintenance Projects
 Fiscal Year July 1, 2013 - June 30, 2014

Product Category and Description	Usage	Quantity	Unit of Measure
1-Asphalt:			
Reclaimed Asphalt Pavement (RAP)	Asphalt Mix Additive	1,425,955	Tons
Reclaimed Asphalt Shingles (RAS)	Asphalt Mix Additive	176,721	Tons
Reclaimed Asphalt Pavement (RAP)	Shoulder Reconstruction	36,455	Cubic Yards
Hot-In-Place Asphalt Recycling	Pavement	3,138	Square Yards
Full-Depth Reclamation	Pavement	123,008	Cubic Yards
2-Clearing and Grubbing Debris:			
Mulch	Mulch	340	Acres
Mulch	Mulch - Roadside Environmental	2,010	Cubic Yards
Mulch	Erosion Control	19,750	Cubic Yards
3-Coal Combustion Products:			
Fly Ash	Concrete Mix Additive	*21,159	Tons
Fly Ash	Flowable Fill	588	Cubic Yards
4-Concrete:			
Recycled Concrete	Aggregate Base Course (ABC)	59,876	Tons
Recycled Concrete	Fill Material	947	Tons
Crack and Seat	Base Material	200	Tons
5-Glass:			
Recycled Glass Beads	Pavement Markings	7,488	Tons
6-Plastic:			
Recycled Plastic Offset Blocks	Guardrail Offset Blocks	304,018	Each
Recycled Plastic Pipe (All Types and Sizes)	Pipe	1,760	Linear Feet
Recycled Plastic Sign Supports	Sign Supports	100	Each
Recycled Plastic Flexible Delineators	Flexible Delineators	590	Each



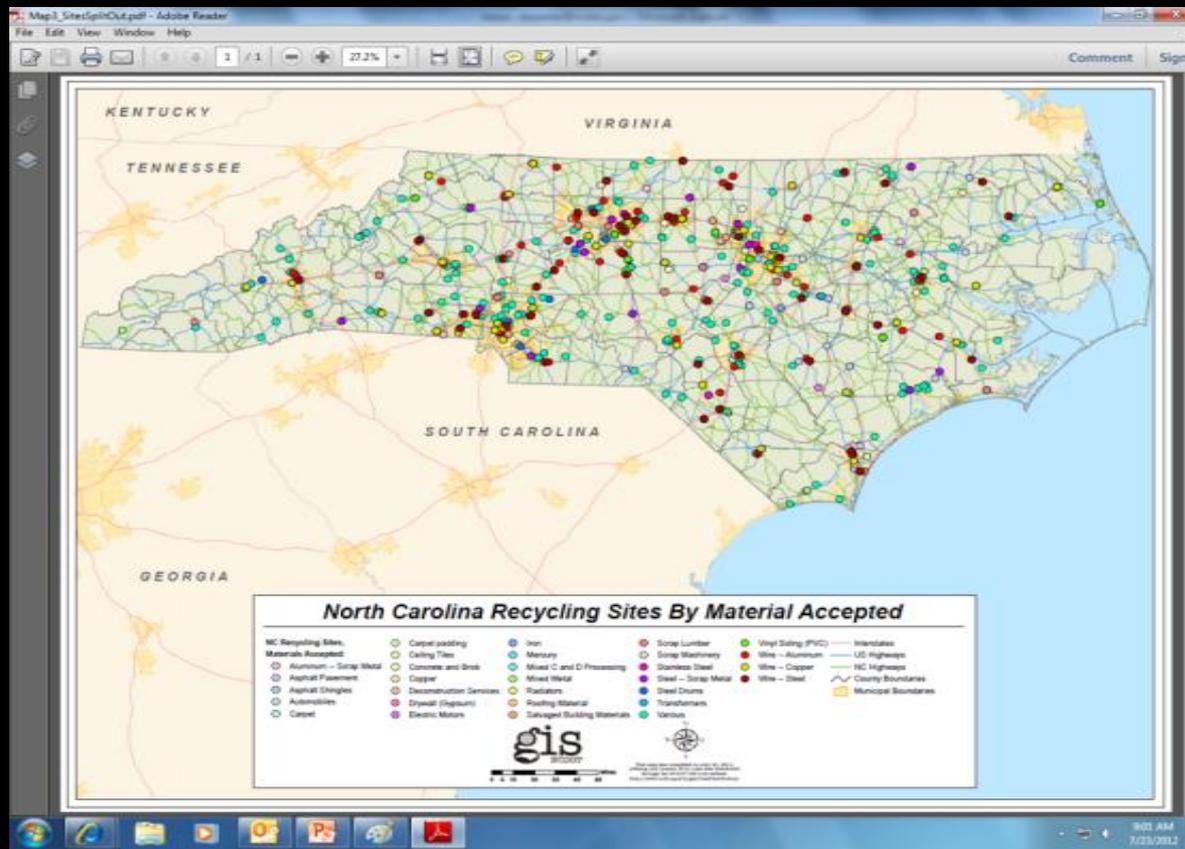
North Carolina Department of Transportation
 Value Management Unit
 Resource Conservation Program



7-Scrap Tires:			
Chipped Tires	Embankment Fill	873	Tires
Crumb Rubber	Crack Sealant	44,535	Tires
Tire Sidewalls	Traffic Drum Ballast	2,623	Tires
Whole Tires	Retaining Wall	150	Tires
8-Roadside Environmental:			
Animal Waste	Fertilizer/Soil Amendment	650	Tons
Shredded Hardwood Bark Mulch	Plant Bed Mulch	700	Cubic Yards
Tobacco By-product	Soil Amendment	88	Tons
Pallets	Designer Mulch	320	Cubic Yards
9-Other:			
Asphalt Millings	Pot holes/Shoulder drop-offs	127	Tons
Scrap Metal		7	Tons
Class B Rip Rap	Road Base	400	Ton
Rubberized RRX Material		40	Linear Feet
Steel Silt Fence Post	Metal	390	Each
Recycled Hot Mix Asphalt	Asphalt	38,466	Sq. Yd.
10-Reused Materials:			
Aggregate Base Course	Aggregate Base Course	21,393	Tons
Concrete Pipe	Concrete Pipe	1,106	Linear Feet
Guardrail	Guardrail	10,621	Linear Feet
Portable Concrete Barrier	Portable Concrete Barrier	46,030	Each
Sign Posts	Sign Posts	6,429	Each
Signal Heads	Signal Heads	700	Each
Signs	Signs	4,300	Each
Steel Beams	Steel Beams	103,675	pounds
Signal Cabinets	Signal Cabinets	8	Each
Cable Guiderail Reset	Guiderail	14,109	Linear Feet
Rip Rap		5	Tons
Timber Bridge Joist	Wood	120	Linear Feet
Timber Bridge Deck	Wood	360	Linear Feet
Sheet Pile	Metal	600	Linear Feet
Prestressed Concrete Cored Slab Beams	Storage Platform for Equipment	20	Each
Concrete Block		350	Each

C&D MAP

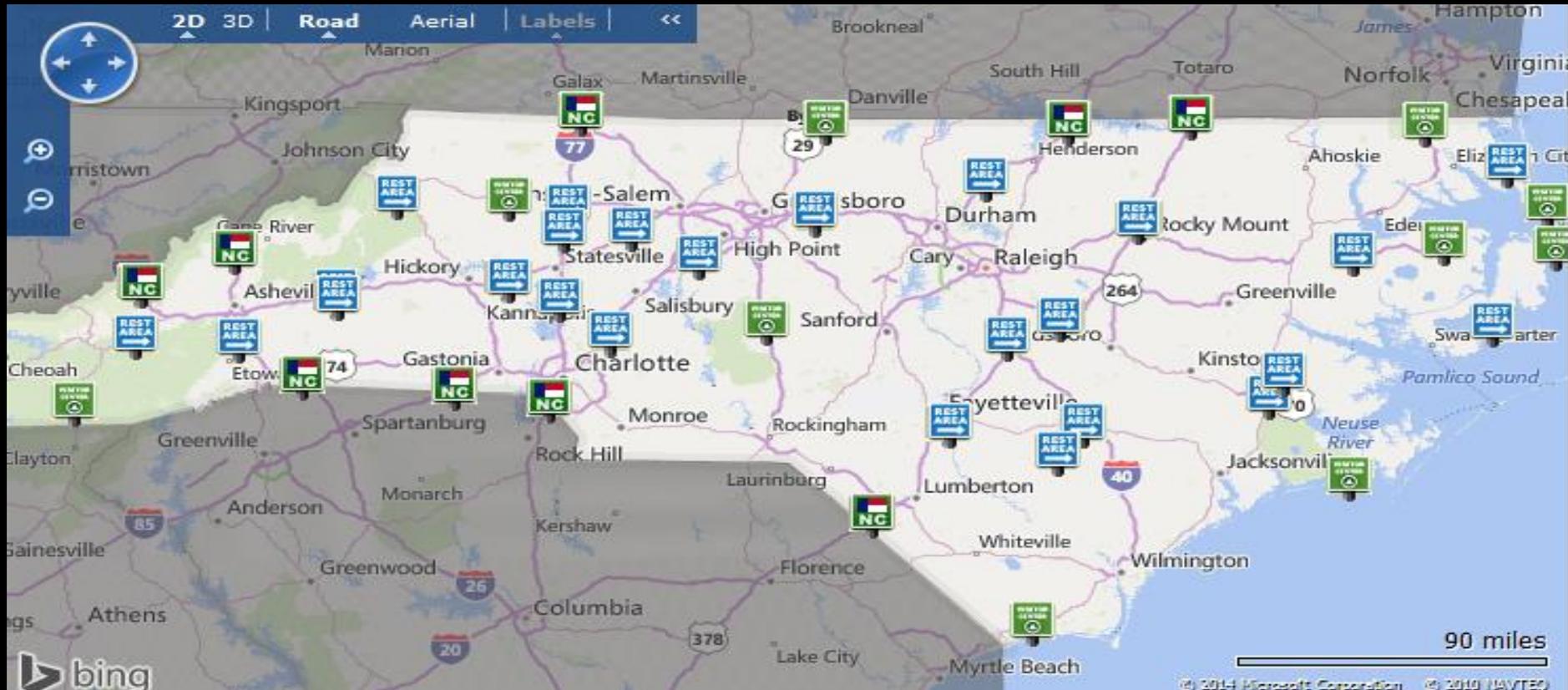
- <https://connect.ncdot.gov/resources/environmental/pages/north-carolina-recycling-locations.aspx>



N.C. Rest Areas

Thousands Of Visitors Annually

60- Rest Stop Areas



N.C. Rest Areas



Rest Areas 2013-2014	Total
Plastic	7,119
Aluminum	2,765
Glass	6,210
Newsprint	3,646
Comingled	152,421
Cardboard	15,556
GRAND TOTALS	187,717

Tons

94



N.C. Rest Areas

❖ Collection

Out-side Contractor

1. Janitorial Contract
2. Waste Hauler Contract

In-House

1. DOT Staff

❖ 420- Total containers



Top- Down Support



Secretary of Transportation- Anthony Tata

“NCDOT is focused on better connecting our citizens to greater opportunities, while taking careful steps to protect our natural resources. We strive to find the balance between human, economic, and environmental impacts in every project we do. As part of those efforts we play an important role in encouraging all of our employees to help reduce waste, recycle, and reuse materials when possible.”

Questions?

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