



Electronics Recycling In North Carolina

NC Project Green Webinar

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Matt Todd

NC DENR

Division of Environmental Assistance & Outreach

Recycling Business Assistance Center



Presentation Overview

- Quick Thoughts on Electronic Waste
- Snap Shot of NC Electronics Recycling Programs in 2010
- Public Program Recovery Rates
- Overview of NC Legislation
- NC Electronics Management Program Statistics
- Electronics Recycling Options in NC
- Suggestions for Local Governments



Quick Thoughts on Electronic Waste

- Amount of Electronics Increasing
 - Proliferation of devices
 - Awareness has created a range of reactions, from push for product stewardship and manufacturer sponsored recycling efforts to state legislation incl. disposal bans
- Electronic Waste is Harmful, but Valuable
 - Exhibit toxic characteristics, esp. in LF environment
 - Many devices contain precious metals
 - Different devices have very different values (+/-)
- Electronic Waste is a Unique Part of the Waste Stream
 - Gap between generation and disposal / end-of-life material in storage
 - Privacy issues related to data
 - Differences between sectors (commercial vs. residential)
- Increasing number of options for management

Projection of Electronic Waste Ready for Disposal (Tons)

	<i>2007 Population²</i>	<i>Percent of Population</i>	<i>All Computers, Mice and Keyboards</i>	<i>All LCD and CRT</i>	<i>All TVs</i>	<i>Cell Phones</i>	<i>Hard Copy Peripherals</i>	<i>Total Electronic Waste</i>
United States	301,290,332	100%	457,800	645,000	910,600	19,200	219,200	2,251,800
North Carolina	9,041,594	3%	13,738	19,356	27,327	576	6,578	67,575

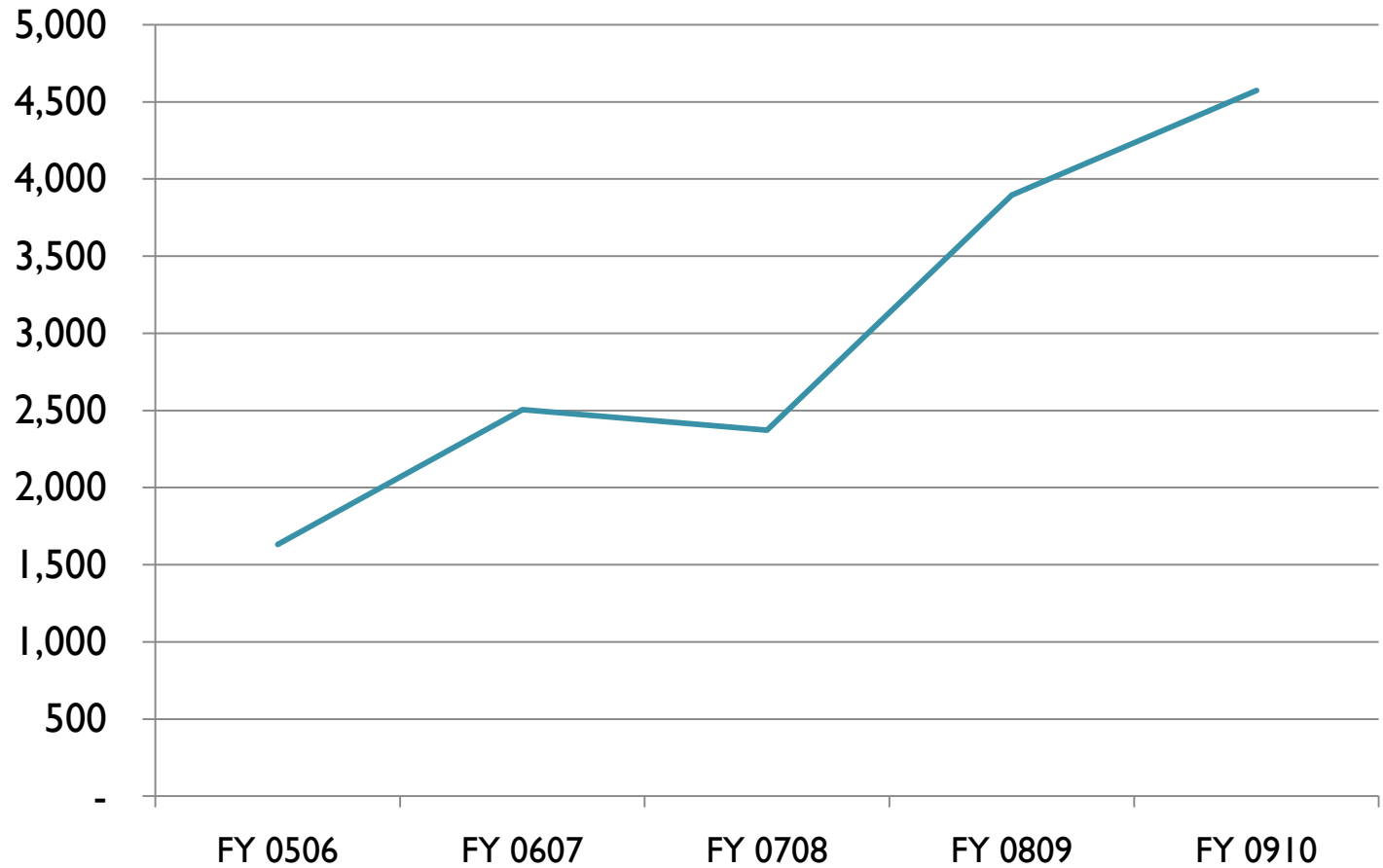
Projected using EPA estimates

Data from “Generation Estimate for Electronics Discards in North Carolina,” a February 2010 fact sheet available on DEAO web site:

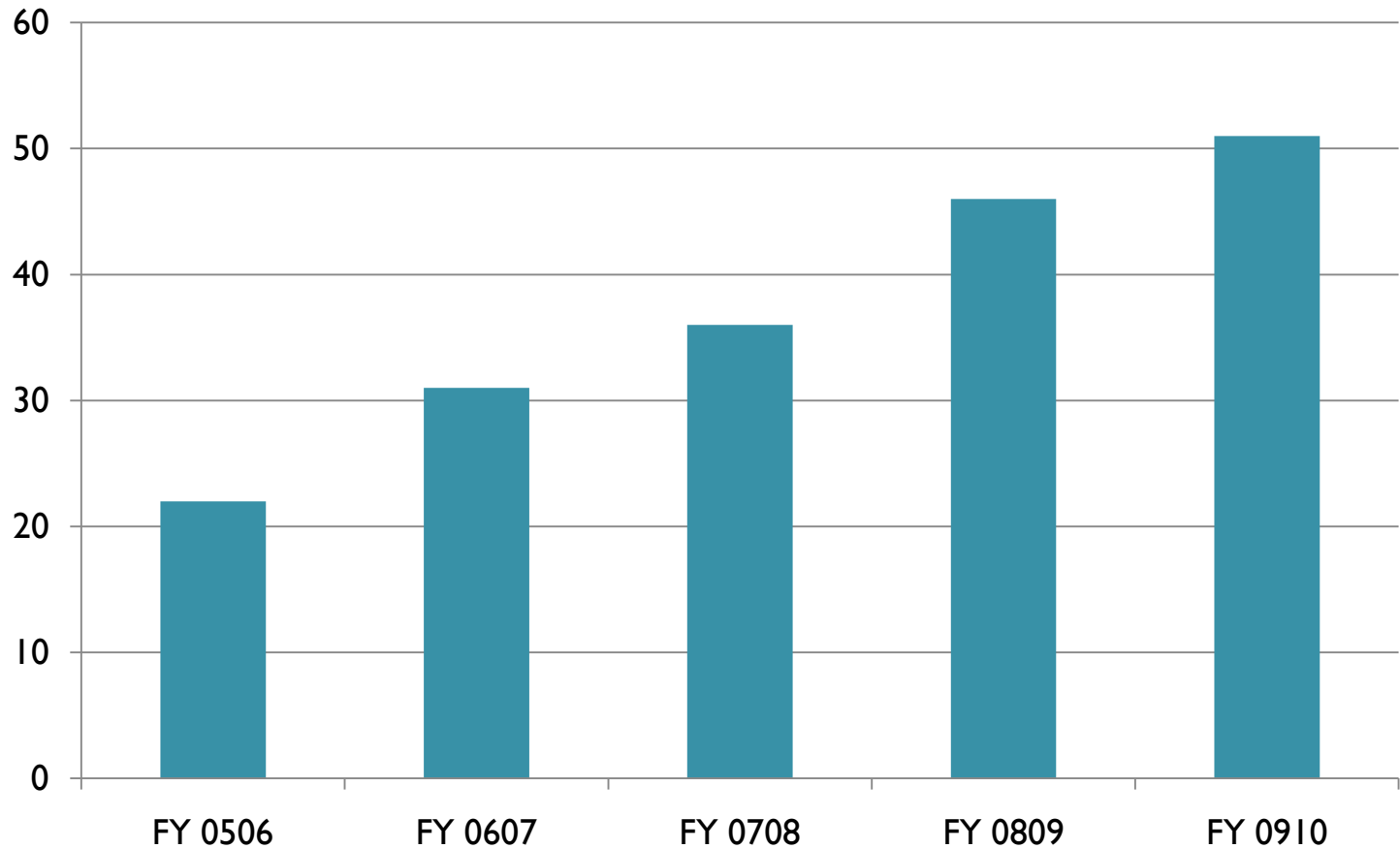
www.p2pays.org/electronics

Snapshot of Public Recycling Efforts in NC

Electronics Diversion by Local Governments (Tons)



Local Government Electronics Recycling Programs



In FY 0910, of the 51 public electronics recycling programs in NC, 44 were county programs and 7 were municipal programs

Top Ten Most Effective Programs in NC, FY 2009-10

Program	Electronics Recycled (T)	Population Served	Per Capita Recovery (lbs/person)
KILL DEVIL HILLS	27	6,800	7.9
ORANGE COUNTY	478	129,296	7.4
HAYWOOD COUNTY	194	57,108	6.8
MACON COUNTY	96	34,227	5.6
EDEN	40	15,702	5.1
ALEXANDER COUNTY	94	36,953	5.1
NASH COUNTY	153	93,981	3.3
BLACK MOUNTAIN	14	8,597	3.2
MONTREAT	1	714	2.8
WAKE COUNTY	1,019	864,429	2.4
ALL NC PROGRAMS	4,574	6,653,579	1.4

Top Ten Programs in NC – Tons Collected, FY 2009-10

Government	Program Tons	Per Capita Recovery (lbs)
WAKE COUNTY	1,019	2.4
MECKLENBURG COUNTY	570	1.3
ORANGE COUNTY	478	7.4
GUILFORD COUNTY	283	1.2
HAYWOOD COUNTY	194	6.8
NASH COUNTY	153	3.3
BUNCOMBE COUNTY	145	1.3
ALAMANCE COUNTY	126	1.7
IREDELL COUNTY	104	1.3
CUMBERLAND COUNTY	103	0.6

Public Program Recovery Rates

Source	Per Capita Recovery (lbs)
NC Programs Average (FY 10)	1.4
NC Top Ten Most Effective Programs (avg. FY 10)	3.4
NC's Best Programs (Kill Devil Hills and Orange County)	7.4
Oregon State Average (2010)	6.3
Washington State Average (2010)	5.6
Maine State Average (2008)	4.0

- For planning, recommend using 2 to 4 pounds per person when making projections
- Potential range 1 to 8 pounds per person



Legislation in NC – 2010

- Senate Bill 887, Session Law 2010-67, created NC Electronics Management Program
 - Manufacturer Responsibility Law
 - Has provisions that impact:
 - Equipment manufacturers
 - Citizens
 - Retailers
 - State agencies
 - Local governments, and
 - Disposal facilities
 - Treats Computer and Television Manufacturers somewhat differently



Provisions in Session Law 2010-67

- Requires equipment manufacturers to register with state and pay annual fee
- Creates private and public infrastructure to manage collection and recycling
- Offers financial support to local governments through Electronics Management Fund
- Includes a ban on the disposal of computer equipment and televisions effective July 1, 2011



Computer Manufacturer Obligations

- Must register with the State, pay registration fee, and label their products with manufacturer name
- Must create and implement plan for providing free and convenient recycling options for “consumers”
- Provides 3 Recycling Plan Choices
 - Level 1- \$15,000 initial registration, reoccurring \$15,000 annual fee
 - Collect only their own products by mail-back *OR* a collection site *OR* an annual collection event
 - Level 2 - \$10,000 initial registration, reoccurring \$7,500 annual fee
 - Collect all manufacturers products at 10 collection sites in the 10 most populated municipalities *AND* host 2 annual collection events
 - Level 3 - \$10,000 initial registration, reoccurring \$2,500 annual fee
 - Collect all manufacturers products at collection sites in 50 counties including the 10 most populated *AND* host 2 annual collection events
- Report once a year to DENR the weight of collected equipment and a summary of their executed plan



Television Manufacturer Obligations

- Must label products and register with the state
- \$2,500 registration fee, \$2,500 reoccurring annual fee (does not apply to manufacturers that sell fewer than 1,000 televisions/year)
- Must recycle their “market share”
- Must conduct and document an assessment of recyclers to show that they use environmentally sound recovery practices
- Report once a year to DENR the weight of TVs collected



“Consumer”

- An occupant of a single detached dwelling unit or a single unit contained within a multiple dwelling unit who used a covered device primarily for personal or home business use
- A nonprofit organization with fewer than 10 employees that used a covered device in its operations

Requirements for Retailers

- Can only sell equipment that is labeled and registered with the state



Requirements for State Agencies

- No state agency, political subdivision of the state, or other public body can purchase equipment from manufacturers not in compliance with law
- Office of Information Technology Services shall make a list of compliant manufacturers available - list of registered manufacturers is available on web site:
portal.ncdenr.org/web/wm/sw/electronics



Requirements for Local Governments

- May not purchase equipment from manufacturers out of compliance with state requirements
- Money available from the Electronics Management Fund for eligible local governments
- Only one local government per county can be eligible for funds, with one exception
- Eligibility gained through amending local Solid Waste Management Plan and submitting to state



Solid Waste Management Plan Requirements

1. Information on existing or planned electronics recycling program including:
 - Collection practices and the types of materials collected
 - Indication of how electronics will be marketed for recycling, and
 - Information on any existing public programs in the county, incl. info on municipal programs (if any)
2. Information on public education plans re electronics recycling
3. Information on methods to track and report tonnage of computer equipment, televisions, and other electronics recovered. Televisions must be tracked separately from other equipment
4. Information on interactions with other local governments to operate electronics recycling programs. If no interactions or cooperation, this must be specified
5. Indication that county will establish a separate account for the receipt and expenditure of funds from the state's Electronics Management Program, and indication that expenditure of state funds will be tracked, and only used to support electronics recycling



Other Provisions for Local Governments

- Become eligible by December 31st of any year to receive the next year's fund distribution
- To remain eligible for funding after January 1, 2013, must ensure that processor is either R2 or E-Stewards certified
- Must keep and maintain program data for inclusion in annual Solid Waste and Materials Management Report to the state

Disposal Ban effective July 1, 2011

- NC Landfill Ban (G.S. 130A-309.10(f)) is amended by adding two new subdivisions to read:

No person shall knowingly dispose of the following solid wastes in **landfills**:

.....

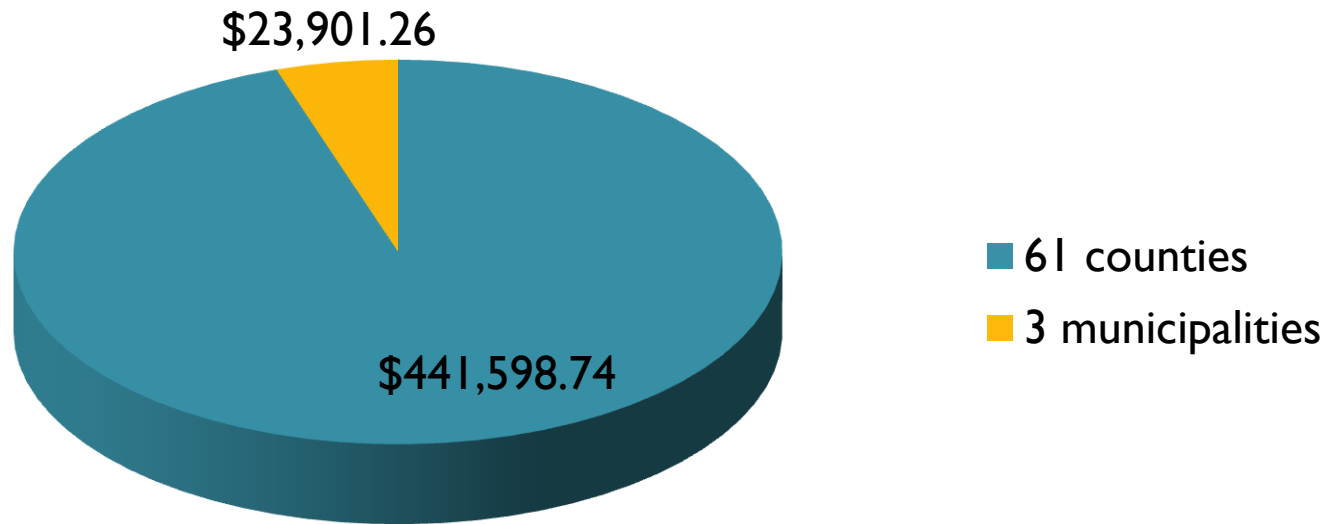
(14) Discarded computer equipment, as defined in G.S. 130A-309.131.

(15) Discarded televisions, as defined in G.S. 130A-309.131.

- Also bans same materials from disposal by incineration

NC Electronics Management Fund Statistics

- First Local Government Distribution occurred in February 2011
- \$465,500 distributed to 64 governments



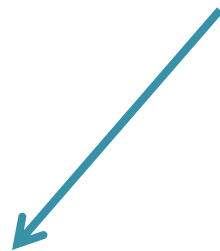
- Total eligible population of ~6.4 million
- Payment at \$0.072 per capita



NC Program Creates Recycling Options

- Provides funding for local governments to build public infrastructure
- Requires Computer Equipment Manufacturers to offer take-back programs, provides incentive to build additional private infrastructure
- Creates incentive for Television Manufacturers to fund recycling by requiring them to fund their market share

Citizen Recycling Options



Computer
Manufacturer mail-
back programs plus
possible collection
events and drop-off
centers

Retailer and non-
profit programs: e.g.,
Best Buy, Staples,
Goodwill

Local Government
Programs

Make your citizens aware of all of their options!!

State Agency Recycling Options



State Surplus computer recycling operations or in-house surplus operations

State term convenience contract 926A

Contract directly with electronics recycling vendor

You have options, but responsible recycling is the top priority

www.p2pays.org/electronics



Attributes of Successful Programs

- Permanent, with easy access for residents including weekends
- Free for participants
- Integrate materials from local governments and school systems into program
- Allow businesses and non-profits to use program
- Offer collection for large items, even if fee is charged
- Partner with other local governments
- Create a secure area where material is consolidated, sorted, and packed for shipment
- Work with your vendor to explore options that maximize value and reduce program cost

Thank You

For More Information / Follow-up:

Matt Todd, NC DENR

Division of Environmental Assistance and Outreach
Recycling Business Assistance Center

Email: matthew.todd@ncdenr.gov

Phone: 919-715-6522

Web: www.p2pays.org

