

Electronic Waste & Recycling

Report on the status of electronics waste and
recycling in the Commonwealth

Department of Environmental Quality

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Regulatory Status

- Disposal of all waste is regulated under the Solid Waste Management Regulations
 - Cathode Ray Tubes may contain lead, which means they could be subject to hazardous waste management requirements
 - Other electronic components may contain hazardous constituents, but at extremely low concentrations
- 2001: DEQ policy is to exclude eWaste from the Solid and Hazardous Waste Management Regulations if the CRTs were intact and recycled or reclaimed
- 2001 – 2002: DEQ promoted this position to EPA and it was incorporated into 2006 amendments to the federal regulations
- Amendments to state regulations will be finalized in 2007

Cathode Ray Tubes: Final Federal Rule

- A cathode ray tube (CRT) is the glass video display component of an electronic device (usually a computer or television monitor)
- CRTs may contain lead as part of their shielding or glass components.
- The amendments to the federal rule streamline management requirements for recycling of used CRTs and glass removed from CRTs under the Resource Conservation and Recovery Act (RCRA).
- The amendments exclude these materials from the RCRA definition of solid waste (and hazardous waste) if certain conditions are met, to encourage recycling and reuse of used CRTs and CRT glass.

Hazardous Waste Management System; Modification of the Hazardous Waste Program; Cathode Ray Tubes
[Federal Register: July 28, 2006 (Volume 71, Number 145)]

CRT Rule Synopsis:

Reaffirms intact CRT/eWaste sent to a collector or reseller for reuse is not RCRA hazardous waste generation.

Used, ***unbroken*** CRTs are not regulated as hazardous waste unless they are stored for more than a year.

Unbroken CRTs pose very low risk of lead releases, therefore storage limitations on unbroken CRTs applies only to collectors or recyclers.

Used, ***broken*** CRTs are not regulated as hazardous waste as long as the following conditions are met:

CRT containers are clearly labeled regarding contents;

CRTs are safely transported in containers designed to minimize releases;

CRTs are stored in a building or container designed to minimize releases; and

CRTs are stored on site less than one year before recycling them.

2001 - 2002 eCycling Pilot

- Regional electronics recycling collection pilot
 - Virginia, other EPA Region 3 states and Washington, D.C.
 - Funded by \$1.1 million grant from EPA
- Virginia hosted 5 one-time collection events
 - Virginia Beach, Richmond, Frederick County, Charlottesville and Montgomery County
- A total of 2,700 tons of end-of-life electronics was collected
 - 46.9 tons collected in Virginia

Status of eCycling in Virginia

- 20 + permanent or regularly scheduled locality-based electronics collection events and programs
 - Each year some localities host special eCycling collection events around Earth Day and America Recycles Day
- 18 Virginia-based eCycling vendors that collect and recycle these materials
- Electronics collected for recycling
 - 2005 = 2,060 tons
 - 2006 ~ 7,000+ tons

Local Collection Programs

- Periodic collection events:
 - Loudoun County (2 times per year)
 - Newport News (4 times per year)
 - Roanoke area (1 times per year)
- Permanent collection programs:
 - Montgomery County
 - Bristol
 - Frederick County
 - Prince William County

Cost of eCycling

- Cost is either paid for by localities from their general or waste program funds or citizens are charged a fee to have their materials accepted
 - the fee (\$8-25) is usually for the computer monitors and televisions while all other materials are accepted free of charge
 - In some cases there is a per pound fee charged on all materials (\$0.12 – 0.25 per pound)

Private Sector eCycling Efforts

- Manufacturer take-back programs
 - for their computers and related equipment
 - Dell, IBM, Hewlett-Packard
- Retailer eCycling services
 - Staples has announced a permanent eCycling program
 - Others have hosted eCycling events
 - Office Depot, Best Buy, Circuit City

DEQ's Role

- Regulatory
 - CRTs are regulated as a hazardous waste unless they are recycled or reclaimed
- Obtaining grants to support collections
 - EPA Region 3 eCycling Pilot Project
 - Dell Computers Inc grant (\$10,000 used to partially fund collections for five counties in 2004-2005)
- Information Resource
 - Web page information on eCycling, vendors, and programs (including recycling data)
- Outreach
 - Promotion of eCycling at conferences and meetings
 - Electronic newsletter with information on eCycling issues

Electronics Waste



Discarded Computers/CRTs may be excluded from regulation *if intact and recycled/reclaimed.*

New CRT Rule information:

<http://www.epa.gov/epaoswer/hazwaste/recycle/electron/crt.htm>

eCycling Page on DEQ's Website – Updates, Vendors, Information Resources

<http://www.deq.state.va.us/ecycling/>