

Best Management Practices for Electronics Collection Sites



This information is provided by the Electronics Recycling Coordination Clearinghouse (ERCC) and is designed to assist local governments and others in setting up and maintaining electronics collection sites. The ERCC provides a forum for information exchange among states that have electronics recycling legislation. This information is not South Carolina-specific nor associated with South Carolina's electronics recycling legislation – see www.scdhec.gov/e-cycle and click on "Legislation."

Introduction ...

This document is intended to harmonize a set of best management practices (BMPs) for collection sites that accept used electronics from covered entities under programs established by state electronics recycling laws. The BMPs also may apply to or be used by collection sites operating outside of state mandatory recycling programs.

A "collector" means a person that owns or operates a collection or storage site for the purpose of receiving and/or consolidating used electronics prior to sending it to recyclers or consolidators. A collector is not involved in the disassembly, demanufacture or recycling of electronics.¹

Best Management Practices/ Requirements ...

1. COMPLIANCE

Collectors must:

- a) comply with all applicable local, state and federal requirements including but not limited to environmental, health and safety requirements; and
- b) be willing to disclose fines received and notices of violation to upstream/downstream partners, such as recyclers, manufacturers or others if any collection site receives a fine or notice of violation that is not corrected within 30 days.

2. DISPOSAL

Collectors must not dispose of whole electronics in landfills or through incineration. This applies to all electronics accepted by the collector, so that the collectors should responsibly handle all electronics, both covered and non-covered items.

3. ON-SITE PRACTICES

Collectors must:

- a) staff the site during operating hours. NO unattended or unsecured drop-off of electronics to protect against theft and provide supervision to prevent mishandling and breakage of electronics;

- b) provide enclosed storage areas or containers so that the collected electronics are protected from the weather. Do not store electronics in an unsecured area or outside overnight;
- c) handle and store electronics in such a way as to minimize breakage:
 - clean up spilled and broken electronics immediately; manage according to established solid and hazardous waste management laws and regulations:
 - store broken cathode ray tubes (CRT) in a building with a roof, floors and walls, and in a container that is constructed and designed to keep dust contained;
- d) adhere to good housekeeping standards including those specified by the receiving recycler and including keeping all storage areas clean and orderly;
- e) ensure storage containers are closed, structurally sound and suitable for the contents;
- f) label containers to clearly identify the type of material enclosed, (if generated):
 - containers of broken CRT glass should be labeled "waste cathode ray tubes – contains leaded glass" or "used cathode ray tubes – contains leaded glass; do not mix with other glass materials" or as required by state law;
- g) label each shipping container (Gaylord, pallet) with the predominant device type container therein (i.e., desktop computers, televisions, mixed electronics, etc.) or as required by state law;
- h) train employees on proper handling and emergency procedures, including proper lifting techniques for heavier devices. Prepare to ship all items collected in their original form and without missing components (including power cords, etc.) unless removed by consumer prior to receipt or as per recycler agreement and allowed by state law. In general, collectors should not disassemble, dismantle, shred, transform or demanufacture electronics;

¹ Some collectors may also be a transporter, refurbisher, and/or recycler of electronics, but its collection site/s need to adhere to these Best management practices during collection operations.

- i) ensure safe stacking and packaging practices:
 - stack and prepare electronics on pallets and in Gaylords according to transporter and recycler specifications, unless other suitable packing materials/containers are specified, including separation by device type if requested or required. When using a pallet, each unit should be placed so that it is stable and each layer secured with shrink wrap so that the entire pallet will remain intact and secure during transport. Stacked height should be no higher than 5 to 7 feet; Collectors should not engage in loose stacking of materials; and
 - all Gaylords must be placed on pallets to ensure they can be safely loaded.
- j) product specific guidelines include:
 - **computers and laptops:**
 - PALLET ONLY: Place computer towers and laptops on pallets, and shrink-wrap stack as it is built to a height from 5 to 7 feet. Protect laptops with separate cardboard boxes and put them with the computers. For laptops that may be intended for reuse or refurbishment, stand vertically to minimize screen damage in stacking and transport or per recycler specifications. Apply enough layers of shrink wrap to ensure the stacked units will not topple over and will remain secure when transported.
 - GAYLORDS: Place units carefully into the box, stacking as efficiently as possible. Reinforce with shrink-wrap as needed.
 - **monitors:**
 - place units with screen facing down on pallets with cardboard between layers to maximize the stability and density of stacked monitors. Position the largest units on the bottom and to the outside edges of the pallet and interlock units as possible. Keep flat screen units upright with the screen facing inward to avoid breakage. Apply enough layers of shrink wrap to ensure the units will remain secure and not topple over when transported. When lowering units into a Gaylord, use extreme caution – including proper lifting techniques – to prevent worker injury and accidental breakage; **OR**
 - place corner monitors face down and the center monitor is face down. Therefore, there are five monitors that are face down for additional monitors can be placed face up and nestled amongst the monitors that are placed face down. This allows for optimizing the space on the pallet for 17-inch monitors. Note this method only works for 17-inch monitors because larger monitors do not allow 9 units per layer.
 - **television sets:**
 - palletize uniform-sized televisions together, with screen facing down on pallets with cardboard between layers. Place flat-screen units upright with the screen facing inward to avoid breakage. Very large console televisions should be placed on the lowest level of a stacked pallet with other units stacked on or around them as possible. Apply enough layers of shrink wrap to ensure the units will remain secure and not topple over when transported.

4. DATA AND REPORTING

Collectors must:

- a) document the length of time collected electronics have been accumulated on-site. Collectors may store devices for up to one year for the purpose of accumulating quantities necessary to facilitate adequate shipment size – unless otherwise required by state, federal law or other guidelines;
- b) maintain bills of lading and other documentation noting the number of Gaylords, pallets or other containers delivered to reporting entity or its designee and the approximate weight of each total shipment if known; and
- c) if reuse is allowed by law and by recycler agreement, document number of units or weight diverted for whole product reuse.

5. DOWNSTREAM

Collectors must:

- a) make available all collected electronics only to R2 (including R2) or e-Steward certified entities; and
- b) send all electronics to the certified recycler or authorized consolidator without diverting any quantities or types of electronics to other vendors, brokers, recyclers or other entities.