

MANAGEMENT OF ELECTRONIC WASTE

What Electronics are banned from disposal?

Waste Electronic Devices from households and businesses cannot be disposed in the trash. Electronic Devices banned from landfill disposal include:

There are many other electronic devices that are not included in the list above; it is recommended that devices that contain potential hazardous components such as circuit boards and screens be managed in the same manner even if they are not specifically banned from landfill disposal. In addition, whole computers, computer peripherals, monitors, printers, and televisions cannot be placed in with scrap metal for recycling.



- computers
- computer peripherals
- computer monitors
- cathode ray tubes
- televisions
- printers
- VCRs & DVD players
- digital converter boxes
- game consoles

- all telephones
- fax machines
- answering machines
- personal electronics
- stereo equipment
- portable music players
- power supply cord (as used to charge electronic devices)

What Electronics are required to be collected for FREE at VT E-cycles collection locations?

All the devices below collected from a Vermont household, charity (501c3), public school district, business with 10 or fewer employees (all with no limit on quantity), or anyone else dropping off 7 or fewer devices:

- Computers (such as desktops, all-in-one computers, laptops, notebooks, netbooks, and tablets)
- Computer monitors (any type - i.e. Cathode Ray Tubes (CRTs), flat panel displays, LCD displays, plasma displays)
- Printers (most types including multifunctional machines - does not include floor-standing models)
- Televisions (any type - i.e. CRTs, flat panel displays, LCD displays, plasma displays)
- Computer Peripherals (items sold exclusively for external use that connects to a computer, such as a mouse, keyboard, scanner, external hard drive, etc.)

How must VT E-Cycles Electronics be managed?

Electronic Waste must be stored at registered locations: 1) on a surface that prevents potentially hazardous materials in electronic devices from migrating into the soil, groundwater, or surface water, 2) within a structure or transportation unit that protects the electronic devices from precipitation, and 3) in a manner that prevents breakage during transportation, storage, and handling. Do not overfill gaylords or stack loose devices. Outdoor storage is prohibited at any time – for any amount of time! For more information see: www.Ecycles.Vermont.gov

How do I manage electronic devices with rechargeable (lithium-ion) batteries? * See below for additional guidance

- Lithium-ion batteries (rechargeable) are highly flammable when damaged. Damaged batteries might give off unusual heat or smells, could be leaking or venting, or could have obvious physical or mechanical damage.
- Be aware of the risk and carefully examine devices with these batteries such as cellphones, laptops, tablets, and other rechargeable personal electronics for any evidence of bulging, leakage, or damage before placing them in a gaylord.
- **HANDLE CAREFULLY.** Do not drop, crush, or break casing of device that might expose battery. Dropping other heavier devices on top of a small electronic device can damage or tear the battery inside and is a fire risk.

How do I manage a broken or damaged Computer, Monitor, Printer or Television?

Some electronic devices are fragile and subject to breakage (e.g., CRTs, flat panel, and LCD display screens). These devices pose a potential threat to human health and the environment because they may contain hazardous substances such as lead and mercury and there is a physical threat from broken glass. Other, more rugged electronic devices with components that contain hazardous substances (e.g. circuit boards, capacitors) under normal conditions pose less of a threat.

Management of broken electronic devices should be based on the type(s) of components contained within a device as follows:

- **Broken Cathode Ray Tubes** or “CRTs” (i.e., older televisions and computer monitors contain leaded glass and picture tubes): If the CRT glass is broken or shows evidence of damage that could cause a release of glass particles, the glass or all of the television or monitor must be:
 - Placed in a closed and labeled container that is structurally sound and will contain the glass. Do not dispose in the trash. Handle very carefully, using gloves to protect from cuts.
 - If the back part of the TV or monitor is exposed and there are bare copper wires, handle carefully as the tube can implode violently and wires can still carry a strong electrical charge.
- **Broken Electronic Devices that contain mercury lamps, where there is visual evidence that the lamp inside is broken** (i.e. LCD):
 - Clean up immediately by carefully scooping up the glass fragments and powder with stiff paper. Use protective gloves. Pick up any remaining small pieces of glass and powder using sticky tape. Wipe area clean with a damp paper towel. Place glass and all cleanup materials in a closed and labeled container that is structurally sound and compatible with the waste (i.e. not a metal container). Do not dispose of in the trash.
 - Do not vacuum broken lamps as this may spread mercury vapor.
 - If the screen is broken and the lamps are intact, the device must be protected and managed in a way to prevent further damage and potential breakage of the lamps during storage.

Bulging or Leaking Batteries and * Additional Battery Guidance

Electronics may contain various types of batteries including lithium metal, lithium ion, alkaline and others. DO NOT REMOVE any batteries from electronic devices, especially small devices such as cellphones, tablets, or laptops as they contain highly flammable lithium-based batteries.

IF a lithium battery in an electronic device shows signs of bulging or damage:

- DO NOT REMOVE the battery as it may be glued into the product and removal can result in an immediate fire or explosion.
- The battery may be in a silver colored, cellophane-type bag or hard-plastic casing. Either way, tearing or puncturing the bag or crushing/penetrating the plastic casing can result in an immediate fire or explosion even if the battery remains within the device.
- Store the whole device(s) outdoors in a watertight, covered container filled with sand or kitty litter.

IF a lithium battery is received separate from its electronic device and starts to swell, smoke or catch fire:

- DO NOT touch the battery with bare hands.
- Immediately bring the battery **outside** and place it in a container of kitty litter, sand, or dirt, and
 - Contact your local [Solid Waste Management Entity](#) - 802recycles.com or
 - **Battery Recycling Contractor:**
 - [Call2Recycle](#)
 - [Battery Solutions](#)
 - [Complete Recycling Solutions](#)
 - [Veolia](#)
 - [ENPRO](#)
 - [Clean Harbors](#)

For more information contact:

Vermont Department of Environmental Conservation
Waste Management and Prevention Division – Vermont E-cycles Program
1 National Life Drive, Davis 1, Montpelier VT 05620-3704
1-855-632-9253 or www.Ecycles.vermont.gov