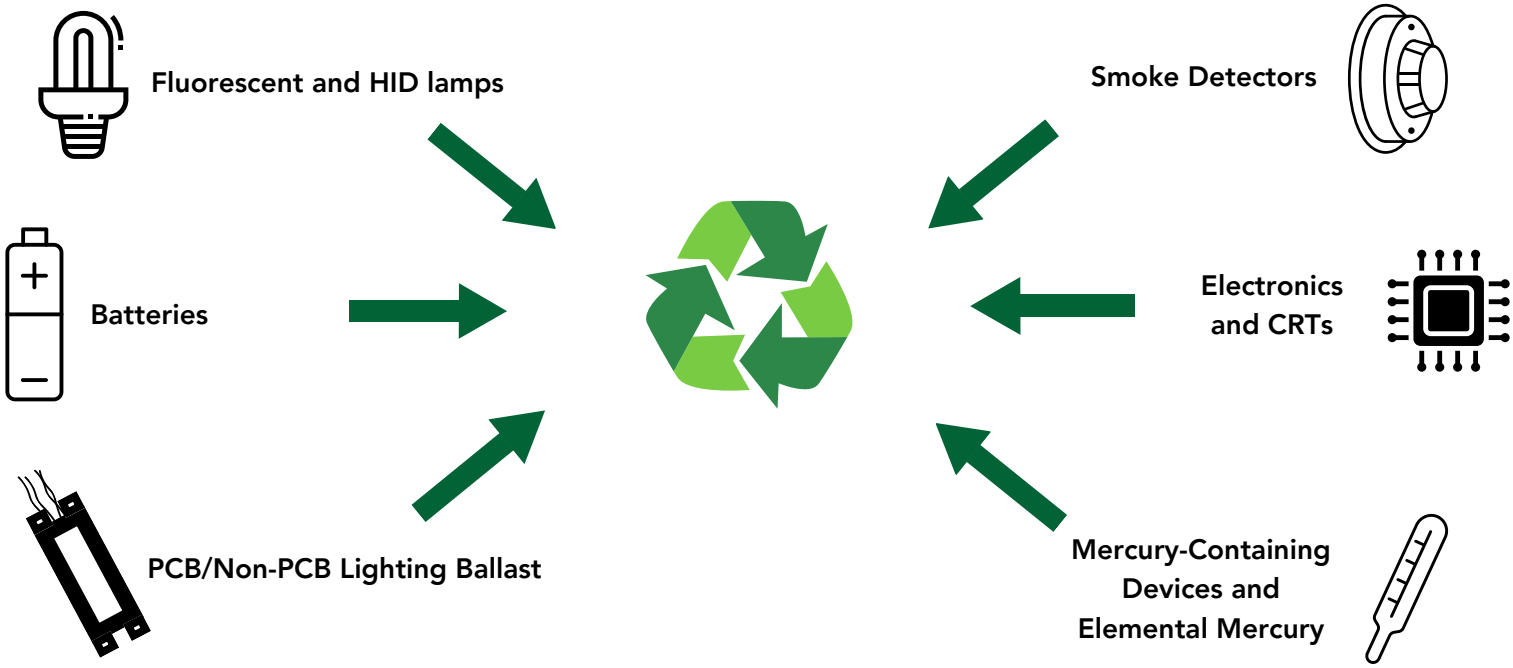
Universal Waste Recycling

Triumvirate Environmental is committed to building a sustainable future through innovative recycling and disposal solutions for universal waste. Our advanced systems enable us to recover universal waste materials in a safe, compliant, and environmentally-friendly way.



The Process

Triumvirate Environmental provides innovative recycling solutions, including transportation and packaging, for universal waste. Utilizing state-of-the-art equipment, as well as Environmental Protection Agency (EPA) and Massachusetts Department of Environmental Protection (MADEP) permits, our certified techniques enable sustainability for difficult to recycle wastes. Demanufacturing, sorting, and breakdown allow our teams to recycle based on component materials, maximizing recovery. Let's break this down by material:

Mercury

Elemental mercury from these universal waste items is reused in new item manufacturing. Ampoules from high-intensity discharge (HID), sodium, and mercury vapor lamps are processed in a mercury retort oven, as are all mercury devices, such as thermostats, thermometers, and switches; mercury debris; and mercury-contaminated calcium phosphor powder. This process heats mercury to extreme, 500°C+ temperatures, which vaporizes mercury off of the materials. Vaporized mercury is then captured in a cooling chamber, allowing it to be reused; recovered mercury is 99.99% pure elemental.

Glass

A Beneficial Use Determination (BUD) permit allows our teams to send glass from lamps to be used as landfill cover, weighing down landfills in a way that enables more waste to be held in a smaller area. Glass from cathode ray tubes (CRTs) are sent to a glass-to-glass recycling facility for recovery.

Metals

Metals are fairly straightforward to reclaim at local metal recovery facilities. Aluminum end caps from lamps, electronics, and non-printed circuit board lighting ballasts are sent offsite for metal reclaim.

General Electronics

Once sorted, weighed, counted, and demanufactured, computer electronics and CRTs are segregated into components. A hard drive shredder ensures data destruction for circuit boards, floppy drives, compact disc-read only memory (CD-ROM) drives, and other similar electronics.

Miscellaneous

Clean calcium phosphor powder can be sent for solid waste recycling once demanufactured from the rest of the universal waste item. As a registered hazardous waste Toxic Substances Control Act (TSCA)-exempt PCB generator, PCB ballasts are sent for downstream disposal. Plastics, as are found in many electronics, are sent for plastics recycling at a local recycler. Batteries are sorted into various chemistries; reactive batteries have their terminals taped to prevent short circuiting.

Throughout the process, you can be sure that our expert teams are dissasembling your waste in the appropriate way, ensuring every small piece is recycled appropriately. To learn more, visit our website at www.triumvirate.com and contact us today!

