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EH&S FACT SHEET

Environment, Health and Safety Information for the Berkeley Campus

Electronic Wastes, Used Batteries & Fluorescent Lights (Universal Waste Management)

Batteries, electronic wastes, and many types of light bulbs contain heavy metals (such as mercury, lead, cadmium and nickel) and cannot be disposed of in the regular trash. The good news is that these wastes (called "Universal Wastes" because they are so common) can be recycled.

This Fact Sheet provides guidance on how to safely and legally manage Universal Wastes. Examples of Universal Wastes include:

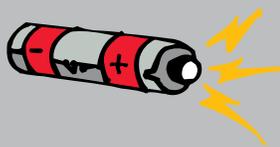
- Batteries: Rechargeable batteries; small alkaline batteries such as AA, AAA, C and D cells, and button cell batteries, such as those used in watches.
- Electronic Wastes: Electronic devices, such as computers and computer monitors, TVs, cell phones, portable MP3 players, pagers, printers, cordless and regular telephones, and microwave ovens.
- Light Bulbs: Straight fluorescent bulbs, compact fluorescent lights (CFLs), high-intensity discharge (HID), metal halide, sodium, and neon bulbs.

Storing and Labeling

Store computer monitors so they do not topple over and break. Store bulbs in their original packaging or find another sturdy container, such as a cardboard box. Mixed batteries can become hot so cardboard is not recommended. A metal or plastic collection container is best for batteries. The Office of Environment, Health & Safety (EH&S) provides containers upon request.

Mixed batteries can cause fires. Tape the batteries' terminals or place individual batteries inside a plastic bag first. Also place corroded batteries inside a plastic bag before placing in the container. Store lead acid and other liquid-filled batteries separately.

Labeling is required on containers of spent batteries and bulbs. Go to <http://ehs.berkeley.edu/hm/279-new-hazardous-waste-program-hwp.html> to create and print a label. Be prepared to take a 15-minute training. If you don't have time, use a marker to mark the container with the words "Universal Waste" and the type of universal waste ("Universal Waste Batteries" for example). Also write the date you start collecting the waste and request a pickup within 6 months.



Recycling Universal Waste

UNIVERSAL WASTE TYPE	HOW TO RECYCLE
<p>Electronic Wastes include:</p> <ul style="list-style-type: none"> • CPUs, keyboards, other peripherals • Intact computer monitors • Liquid crystal display and other monitors • Laptop computers • Televisions • Refrigerators (wiped clean of chemicals and biohazards) • Fax machines <p>Unwanted devices that run on batteries, plug into an outlet or have a switch or circuit board are considered electronic waste.</p>	<p>Excess and Surplus will pick up most electronic waste.</p> <p>To contact Excess and Surplus: (510) 642-5330 ucsurplus@berkeley.edu property.berkeley.edu/excess-and-surplus/requesting-salvage-pickups</p> <p>EH&S picks up computer monitors that are visibly cracked (there is a lead dust hazard). EH&S also will remove oil or other hazardous liquids prior to recycling electronics.</p> <p>To contact EH&S: (510) 642-3073 hwp@berkeley.edu ehs.berkeley.edu/hm/279-new-hazardous-waste-program-hwp.html</p>
Used Batteries	<p>Request an EH&S pickup. Go to http://ehs.berkeley.edu/hm/279-new-hazardous-waste-program-hwp.html and select the option for Universal Waste.</p>
<p>Fluorescent, HID, LED, sodium vapor light bulbs</p> <p>Please throw incandescent light bulbs in the trash.</p>	<p>Facilities Services picks up straight fluorescent bulbs.</p> <p>Call (510) 642-1032 or submit a work order.</p> <p>EH&S picks up irregular sized light bulbs.</p> <p>Go to http://ehs.berkeley.edu/hm/279-new-hazardous-waste-program-hwp.html and select the option for Universal Waste.</p>

Cleaning up Broken Computer Monitors and Fluorescent Lights

If a computer monitor breaks, lead dust could be released. Lead generally settles out of the air quickly but vacuuming or sweeping the area can create airborne lead dust. If a CFL breaks, a small amount of mercury vapor and a mercury-containing powder will be released.

If you are comfortable cleaning up a broken computer monitor or fluorescent lamp, minimize contact with the toxic components by cleaning up the electronic waste as outlined below:

- Ventilate the area where breakage occurred for 15 minutes. Post signs to prevent anyone from walking through the area.
- Carefully scoop up glass pieces and powder using stiff paper or cardboard.
- Use sticky tape to pick up any remaining small glass fragments and powder.
- After all glass pieces are collected, wipe the area with damp paper towels – and wipe off your shoes if necessary.
- Place all material from the breakage and cleanup into a sealed plastic bag.
- If further cleaning is needed, vacuum the area, but only after all visible materials are removed.

If the room has no windows or a poor exhaust system, or more than one monitor or fluorescent lamp breaks, call EH&S at (510) 642-3073 for assistance.

Electronic Waste at Home

Please do not bring your household electronic waste (or other hazardous wastes) to UC Berkeley. [Stopwaste.org](http://www.stopwaste.org/home/index.asp?page=293) (<http://www.stopwaste.org/home/index.asp?page=293>) is an excellent resource for locations that collect Universal Wastes from the public at no charge.

Thank you for doing your part to protect the environment and meet regulatory requirements.

