

Part two of a series:

# Recycling and pollution prevention go hand in hand

National Pollution Prevention Week, Sept. 17-23, is an opportunity for individuals, businesses and local governments to emphasize and highlight their pollution-prevention and waste-reduction activities and achievements, expand their pollution-prevention efforts and commit to new actions.

Fluor Hanford, the cities of Richland and West Richland, the Richland School District, DynCorp Tri-Cities Services, the Fluor Hanford Waste Services organization and employees of the 222-S Laboratory will sponsor events to raise community awareness of pollution prevention.



*In the first installment of this series, we showed how recycling can save energy and water in addition to the raw materials used in manufacturing. This article explores some things you may not have known were recyclable, and why it's important to our planet that we recycle.*

## How much can one light bulb save?



According to information from the Environmental Protection Agency, replacing a 60-watt incandescent light bulb with a 15-watt energy-efficient compact fluorescent lamp can annually save 157 kilowatt hours and prevent the release of 300 pounds of carbon dioxide, 1.4 pounds of sulfur dioxide and close to a pound of nitrogen oxide to the air.

The purchase of that compact fluorescent bulb will also bring you a 37.5 percent annual return on your investment.

Switches, batteries, thermometers and fluorescent lamps represent the tip of the iceberg when it comes to products and equipment containing mercury. Mercury, the harmful effects of which have been documented for decades, is the essential element used in the majority of fluorescent and high intensity discharge lamps. These and other types of lamps, including incandescent, may also contain toxic metals such as cadmium and lead, rendering them environmentally hazardous.

Mercury can be safely recovered and reclaimed from the widest range of spent materials — so what was once waste can be used again. And other valuable materials, including steel, copper, aluminum, lead, glass, plastic and phosphor powder, can be recovered and reclaimed for industrial use.

### Consider these recycling facts:

- **Ninety-five percent of a fluorescent lamp** can be recycled. As lamps are crushed, the material moves to a separator, which vibrates it and separates it into crushed glass, crushed metal

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and end caps. Particulate debris and phosphor powder from the crushers and separator pass into a dust collector where inductive heating is used to maximize mercury removal. Exhaust air containing mercury vapor is fed through carbon filters that remove mercury. Phosphor powder is removed from the dust collector and used in the manufacture of cement products. Mercury-laden carbon filters are removed from the carbon absorption tanks and the mercury is extracted.

- **Eighty percent of an electrical ballast (non-PCB)** can be recycled. Ballasts are placed on a conveyor system where the metal casing is removed. Next, the ballast goes into a chiller to cause the potting compound to become brittle. The potting material is removed as waste, then the clean ferrous metal is shipped to a mini mill, the copper to a refinery and the aluminum to a smelter.

- **Ninety-nine percent of a lead acid battery** is recyclable. The batteries are off-loaded onto conveyor systems for chopping and crushing. They're separated in a liquid process where the lead sinks to the bottom and the plastic floats to the top. The plastic is then ground and washed and sent to a plastic recycler where it is reused to make battery casings. The lead is used to make new lead for batteries. Sulfuric acid from the batteries is neutralized and then disposed of.

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## Week of events celebrates pollution prevention

### Monday, Sept. 17

- Brown-bag session at 2704-HV, noon - 1 p.m., "Shop SMART" (Save Money and Reduce Trash) seminar. Call Bertrand Griffin II at 373-4327.

### Tuesday, Sept. 18

- Brown-bag at the HAMMER Training Center Administrative Building, Room 14, noon - 1 p.m. Shop SMART seminar. Call Kathy Hinkelman at 376-7631.
- Waste Services presentations, MO-279 in 200 West, "Water and energy conservation," 11 a.m. - noon and 1-2 p.m. Call Gayle Valante at 373-1621.
- Watch for the KidZone article on pollution prevention in the *Tri-City Herald*.

### Wednesday, Sept. 19

- Elementary students will pick up trash at Lewis & Clark, Marcus Whitman, William R. Wiley, Richland High, Jefferson and Tapteal schools in Richland, and Westgate and Washington elementary schools in Kennewick.
- Environmental ventriloquist Keith Ramsay will perform at the Richland Public Library at 7 p.m.
- Shop SMART seminar at the Richland City Council chambers, 7 p.m. Call Gail Baasch at 942-7730 to reserve your spot.

### Thursday, Sept. 20

- Pasco High driver education classes will be learning about the littering laws.
- Brown-bag at 222-S Lab, "Energy and Water Conservation," noon - 1 p.m. Call Bertrand Griffin II at 373-4327.
- Energy and Water Conservation presentation, FFTF, 1:30 - 2:30 p.m. Call Al Hill at 372-8963.

### Saturday, Sept. 22

- Environmental Trade Show at Home Depot, 9 a.m. to 2 p.m., featuring vendors, exhibitors, entertainment and activities for kids (coloring contest and building projects). There will be a recycled clothing boutique as well as collection containers for cell phones, eyeglasses, phone books and hearing aids. Tri-City Motor Sales will demonstrate an electric car and local utilities will have ideas on saving water and energy.
- Household hazardous waste collection event, 9 a.m.-1 p.m., Tri-Cities Coliseum parking lot.

### Sunday, Sept. 23

- Recyclables treasure hunt at the Three Rivers Children's Museum, 650 George Washington Way. ♦

## Recycling and pollution prevention go hand in hand, cont.

- **Seventy-five percent of an alkaline battery** is recyclable. The batteries are shredded in a granulator. The steel is separated magnetically and sent to a steel recycler. The rest of the shredded battery is sent to a zinc smelter to be used in the smelting process.

Hanford's Centralized Consolidation/Recycling Center accepts all types of batteries, lamps, mercury and mercury-containing equipment for recycling. Also, the center manages contracts for used shop towels, used oil and propylene glycol.

HNF-EP-0863, Rev. 1, "Management Plan for Recyclable Materials Administered by Hanford's Centralized Consolidation/Recycling Center," describes the standards for management of recyclable materials both before and after consolidation at the center. Contact Candice Marple at 373-6742 for more information. ♦