

James Chen

Program Coordinator, Riverside County Department of Waste Resources

James Chen is a program coordinator at Riverside County Department of Waste Resources, where he oversees the hazardous waste inspection program, household hazardous waste collection program, and transfer station audit program. James has designed, implemented and evaluated numerous household hazardous waste collection programs and hazardous waste diversion programs. Prior to joining Riverside County Department of Waste Resources, James worked for the City of San Diego overseeing its household hazardous waste collection program. James has a Bachelor of Science degree in chemistry/biochemistry from the University of California, San Diego.



HOUSEHOLD HAZARDOUS WASTE COLLECTION PROGRAM

HOUSEHOLD HAZARDOUS WASTE

❖ Discarded household products that meet any of the following criteria

- Corrosive
- Toxic
- Flammable / Combustible
- Reactive



HOUSEHOLD HAZARDOUS WASTE



Paint Products

Paint, stain, varnish, adhesive paint thinner, resin, epoxy, caulking & wood preservatives



Lawn and Garden Products

Pesticides, herbicides, poisons, fertilizers, moth balls, garden chemicals, flea powder, BBQ propane tanks and kerosene oil



Automotive Products

Used oil, oil filters, antifreeze, gasoline, diesel, automotive chemicals, brake fluid and transmission fluid



Household Products

Cleaners, degreasers, aerosol cans, Drain openers, disinfectants, bleach, Pool chemicals, air fresheners, lighter Fluid, nail polish and hair bleach



Universal Waste

Batteries, fluorescent tube and bulbs, light ballasts, smoke detectors, mercury devices and cooking oil



Electronic Waste

Televisions, monitors, computers, And electronic devices

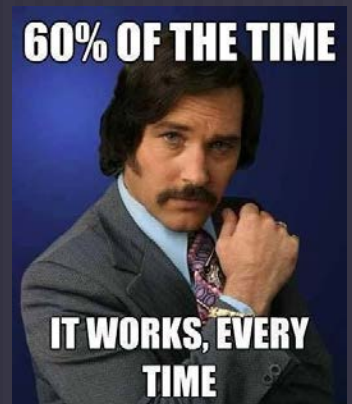
HOUSEHOLD HAZARDOUS WASTE

❖ Not Regulated by EPA.



❖ Resource Conservation and Recovery Act (RCRA) excludes HHW from the definition of hazardous waste.

❖ HHW is regulated on the State level, a CA hazardous waste.



HOUSEHOLD HAZARDOUS WASTE

It is illegal to dispose of HHW in the trash, down the drain, into storm drain.



UNIVERSAL WASTE

- ❖ Hazardous wastes that are widely produced by households and businesses
 - **Batteries** – rechargeable / alkaline / button cells
 - **Electronic Devices and CRTs**
 - **Aerosol cans** (non-empty)
 - **Electric lamps** – fluorescent / HID / sodium vapor / contains mercury or lead
 - **Mercury containing equipment** – thermostat / thermometer / switches / novelties (jewelry, footwear, and ornaments)

ELECTRONIC WASTE



- ❖ Cathode Ray Tubes (CRT) devices - older televisions and computer monitors
- ❖ LCD and Plasma monitors and televisions
- ❖ Desktop and laptop computers and peripherals (keyboard and mouse)
- ❖ Portable DVD players with LCD screens
- ❖ Telephones, cell phones, and answering machines
- ❖ Stereo equipment, radios, tape and CD players/recorders, calculators
- ❖ Video recorders and digital cameras
- ❖ Microwaves

SHARPS



- ❖ Needles, lancets, epi pens

- ❖ Option 1

 - Kiosk at Lamb Canyon and Badlands

- ❖ Option 2

 - Bring to permanent HHW facilities or temporary events

- ❖ Must place in sharps container or approved container



MEDICATION



❖ Option 1

CA drug takeback program. www.takebackdrugs.org

❖ Option 2

Permanent and Temporary HHW Collection Facilities

Remove pills from containers and consolidate in a clear plastic bag

WHAT IS AN "EMPTY" CONTAINER?

- ❖ **Container with liquid** - completely drained so that no liquid can pour from the container when it is tilted or held upside down.
- ❖ **Container with solid** - completely scraped out with no remaining buildup.
- ❖ **Aerosol** - contents and pressure are completely dispensed.
- ❖ **Cylinder** - pressure approaches atmospheric pressure.

SAFE STORAGE AND PRACTICE

- ❖ Follow any instructions for use and storage provided on product
- ❖ Keep product in original container and never remove labels
- ❖ Never mix or consolidate with other chemicals
- ❖ Keep out of reach of children and pets
- ❖ Purchase only amount needed
- ❖ Consider less toxic products (green cleaning / green chemistry)

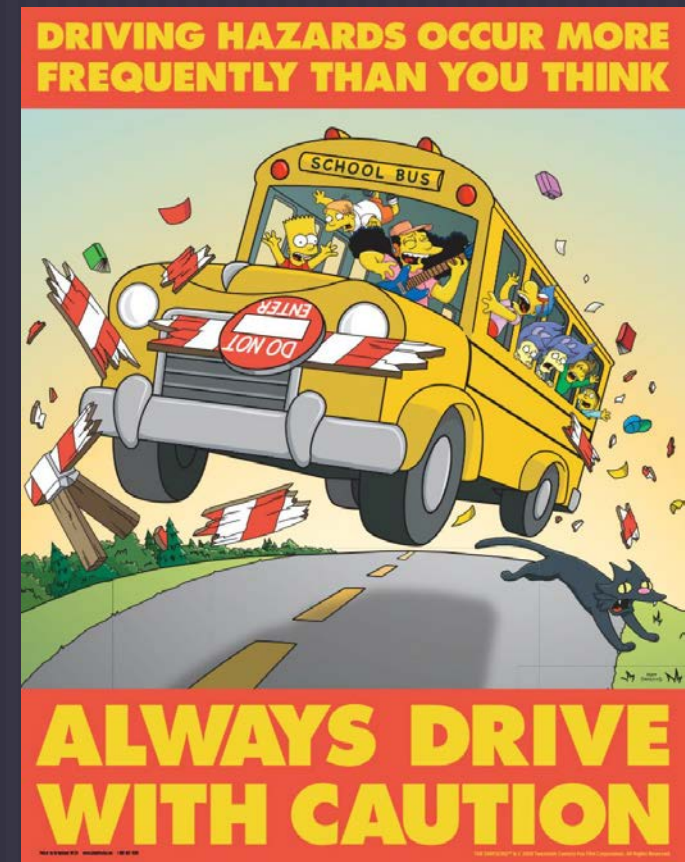


HHW COLLECTION MECHANISMS

- ❖ **Permanent Facilities**
 - Agua Mansa
 - Palm Springs
 - Lake Elsinore
 - Lamb Canyon (starting January 2021)
- ❖ **Temporary Events**
 - Sixteen locations / 34+ events a year
- ❖ **Recycle-Only Facilities aka ABOP**
 - Lamb Canyon
 - Badlands
 - Murrieta

SAFE TRANSPORTATION

- ❖ 125 pounds or 15 gallons per trip per vehicle
- ❖ Secure leaky containers and loose loads
- ❖ Transport away from passengers (cargo space, trunk, & truck bed)
- ❖ Separate from trash and recyclable materials
- ❖ Label unmarked containers



UNACCEPTABLE WASTE

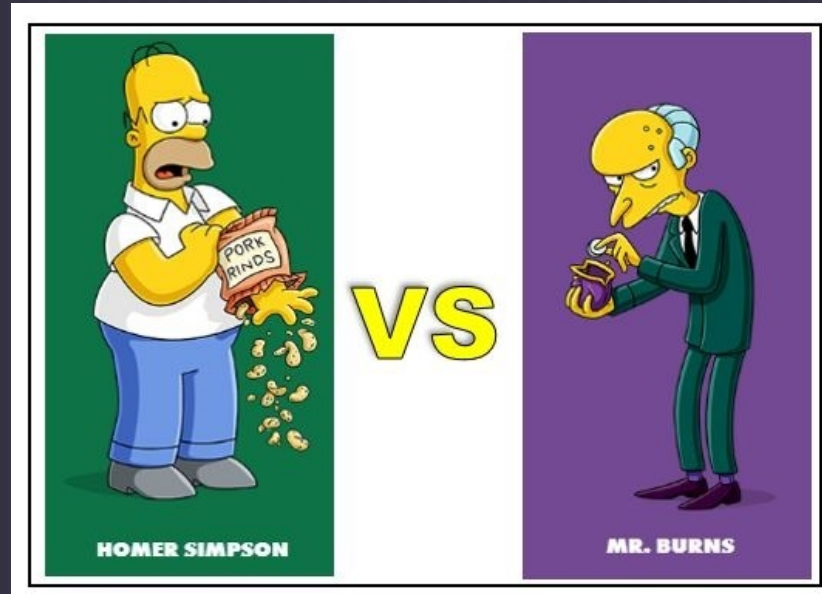
- ❖ Asbestos
- ❖ Ammunition, explosives, fireworks
- ❖ Containers larger than 5-gallon
- ❖ Radioactive wastes
- ❖ Commercial compressed gas cylinder
- ❖ Controlled substances and scheduled drugs
- ❖ Out-of-county residents
- ❖ Business generated hazardous waste



BUSINESS WASTE

❖ Any hazardous waste generators that is not a homeowner

- Government
- Church
- School
- Non-profit
- Waste Hauler
- Hospital / Clinics
- Restaurant / Retail
- Warehouse
- Home business



OTHER OPTIONS

- ❖ **Paint** www.paintcare.org
 - Paint Stores (Dunn-Edwards, Sherwin Williams, Vista Paint)
- ❖ **Rechargeable battery** www.call2recycle.org
 - Home Depot, Lowes, Battery Plus, Best Buy
- ❖ **Used oil and oil filters** www2.calrecycle.ca.gov//usedoil/certifiedcenters
 - Auto Zone, O'Reilly
- ❖ **E-wastes** www2.calrecycle.ca.gov/Electronics/eRecycle
 - Salvation Army, Goodwill
- ❖ **Medications** www.takebackdrugs.org

VERY SMALL QUANTITY GENERATOR (VSQG)

- ❖ Design to help businesses that generates small amount of hazardous waste
- ❖ To qualify, must generate less than 220 pounds or about 27 gallons of hazardous waste per month
- ❖ Accumulate no more than 2,200 pounds of hazardous waste on-site at any given time
- ❖ Wastes must be HHW like
- ❖ No medical waste and sharps

<http://www.rcwaste.org/business/hw/VSQG>