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Web Cast

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Scope of the Problem

- **Currently in the US, there are:**
 - 132 million household refrigerators
 - 54 million stand-alone freezers
- **15% - 20% of households have 2nd refrigerator/ freezer in basement or garage (~23 million units)**
 - Typically, these are older units that are not energy efficient
- **~ 5% of units are disposed each year (~8 million refrigerators/freezers)**
 - Few are disposed in an environmentally-sound manner
- **A household refrigerator made about 20 years ago consumes more than twice the energy of a unit that has earned the government's ENERGY STAR® label**

Why Take Old Appliances Off the Grid?

- Reduce energy demand
 - Replacing an energy-inefficient unit with a new unit with the ENERGY STAR[®] label can save 700 kWh/year or more
- Save consumers money
 - Removing an energy-inefficient unit can save over \$140/year
 - Replacing an energy-inefficient unit with a new energy-efficient unit can save more than \$70/year
- Impact air quality
 - Reduced electricity generation leads to reduced emissions of some criteria air pollutants

Why Properly Dispose of Appliances?

- **Prevent emissions of ODS & GHGs**
 - Refrigerant and foam insulation contain ODS/GHGs
- **Prevent the release of harmful substances**
 - PCBs, mercury, and used oil
- **Save landfill space and energy by recycling (not landfilling) durable materials**
 - Recycling metals, glass, and plastics reduces energy needed to manufacture virgin materials; recycling also reduces demand for landfill space

A Single Refrigerator Manufactured Prior to 1995 Typically Has...

Metal, Plastic, and Glass Casing/Refrigerator Shell

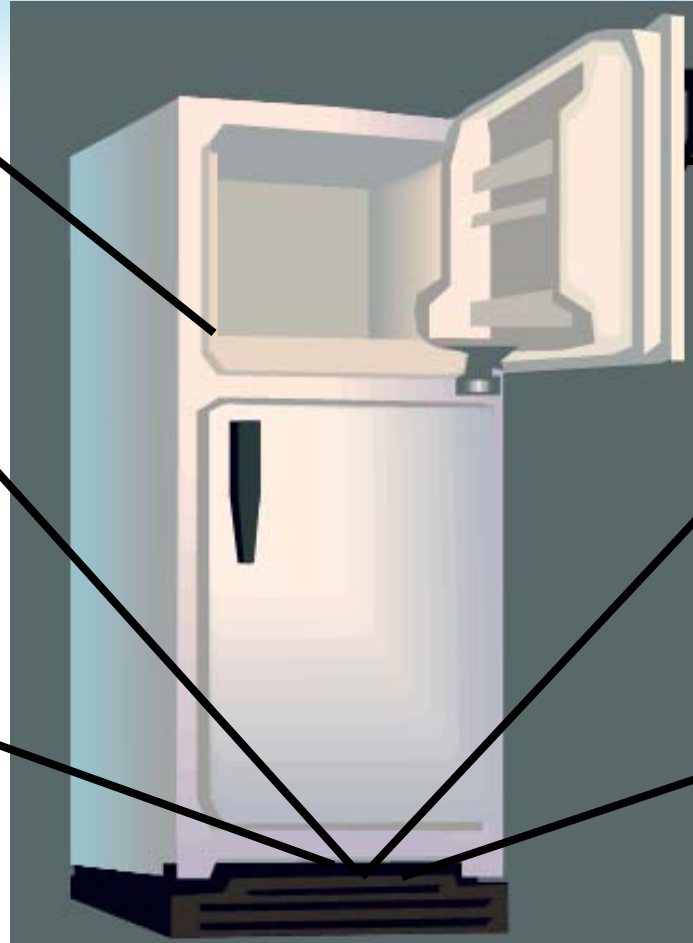
140 lbs metal
20 lbs plastic
3 lbs glass

Used Oil

(May be contaminated)
0.5 lb

PCBs

(Capacitor)
Small quantities



CFC-11

Foam Insulation
1.0 lb

CFC-12

Refrigerant
0.5 lb

Mercury Switch

0.003 lb

Proper recycling/destruction of these substances is key

RAD Program Objectives

Work in partnership with utilities, retailers, manufacturers, and municipalities to:

- **Reduce emissions of ozone depleting substances (ODS)**
 - Through recovery and proper disposal of ODS refrigerants and foam blowing agents from disposed appliances
- **Reduce greenhouse gas (GHG) emissions**
 - By reducing energy demand associated with the use of old refrigerators
 - By reducing emissions of refrigerants and foam blowing agents that have high global warming potentials
- **Support and recognize industry**
 - Monitor progress and increase standards for recovering ODS refrigerant and foam by promoting best available technologies and practices
 - Publicly recognize industry leaders going above and beyond legal requirements

RAD Retailer Partners

The Sears logo is displayed in a blue, italicized serif font with a red swoosh underneath. It is centered on a white rectangular background that is placed over a large, light green recycling symbol (three chasing arrows) on a blue gradient background.

Sears

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www.epa.gov/ozone/partnerships/rad/index.html

