



White Goods Storage, Recycling And Disposal

Technical Guidance Document SW-1995-G2

White goods are large items such as refrigerators, freezers, clothes washers and dryers, ranges, water heaters, microwave ovens, dehumidifiers, trash compactors, and air conditioners. These products comprise about 2% of the municipal solid waste produced in the United States. Kansas allows white goods to be disposed of in landfills but encourages alternatives to disposal such as repair, resale, or recycling.

Recycling

The best option for handling used appliances that are no longer worth repairing is to recycle them. The advantages to recycling include: energy savings, reduced air and water pollution, and conservation of natural resources. Appliances contain many high value materials that can be recycled such as steel, aluminum, and copper.

Collection

Discarded appliances can be picked up at curbside by trash haulers although there may be a disposal charge for major appliances. Otherwise people can haul appliances themselves to collection centers, recycling centers, scrap dealers and landfills.

Storage

White goods should be stored in an area where water will not accumulate. White goods should also be stored in a manner that prevents them from falling onto either the public or landfill personnel. At least once a year accumulated white goods should be transported to a scrap metal dealer for processing. The frequency of transportation should be increased if the facility is accepting a large volume of white goods.

Processing

Appliances used for cooling may contain Freon (R-22 or R-12) which contains chlorofluorocarbons (CFCs) or hydrochlorofluorocarbons (HCFCs). CFCs and HCFCs have been found to contribute to ozone depletion. Appliances manufactured prior to 1979

may have capacitors which contain polychlorinated biphenyls (PCBs). PCBs have been linked to cancer and can accumulate in the fatty tissues of fish and wildlife. Other potentially hazardous chemicals found in appliances include mercury (in switches and gauges) and oil (in transmissions and compressors).

Processing involves separating non-recyclable materials and potentially hazardous constituents that may be in the appliance from the recyclable materials. Some processors then crush and bale the dismantled appliances for shipment to a metal shredding facility.

CFCs and HCFCs

Before an appliance can be recycled or disposed of, the CFCs and HCFCs must be removed (40 CFR 82.156(f)). For information on certification for refrigerant removal, contact the U.S. Environmental Protection Agency's (EPA) CFC Outreach Program at (913) 551-7848.

PCBs

Some older appliances may contain PCBs in electrical capacitors. These capacitors should be removed prior to processing. PCBs, most commonly in a thick oily liquid form, could be released from ruptured capacitors and contaminate large amounts of waste materials if the capacitors are allowed to proceed through shredders which separate recyclable metals from plastics and insulation. For information on PCB disposal contact either the KDHE Bureau of Waste Management at (785) 296-1600 or the EPA at (913) 551-7020.

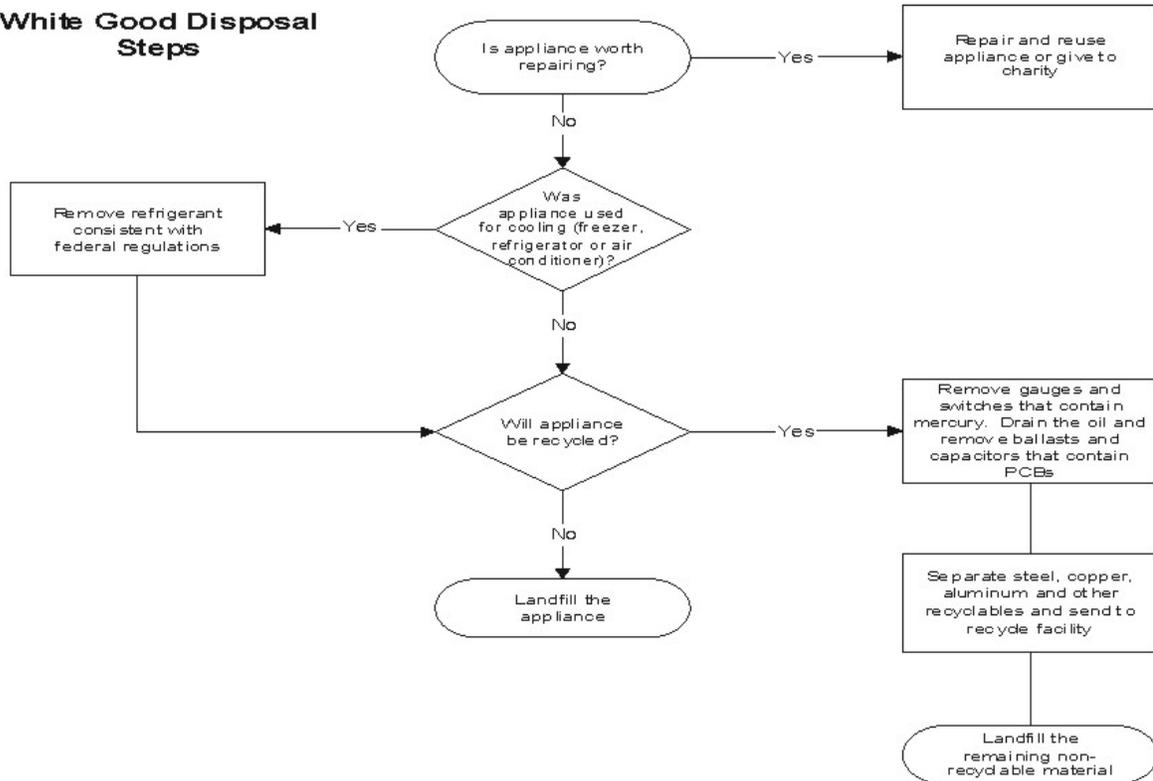
Other Chemicals

Mercury and oil should be removed and sent to a recycling facility prior to recycling or disposing of the appliance.

Disposal

White goods which have not or cannot be recycled may be disposed of at a permitted municipal solid waste landfill or C&D landfill if the ozone depleting chlorofluorocarbons have been removed in accordance with the provisions of the federal clean air act (see the section on CFCs).

White Good Disposal Steps



For additional information regarding the proper management of solid or hazardous waste in Kansas, you may visit the Bureau of Waste Management website at <http://www.kdheks.gov/waste/> or contact the Bureau at: (785) 296-1600, bwm_web@kdheks.gov, or the address at the top of this document.