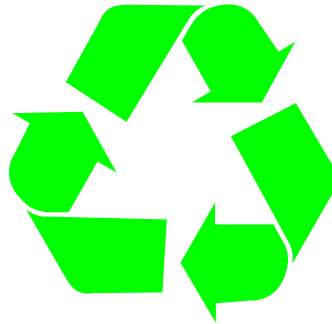


GUIDANCE FOR IMPLEMENTATION OF LOCAL WHITE GOODS COLLECTION PROGRAMS



MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
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The following guidance has been prepared by the Mississippi Department of Environmental Quality (MDEQ) to assist local communities in the development and implementation of white goods collection and recycling programs in their jurisdictions.

I. What are White Goods?

The term “white goods” is used to describe a class of bulky wastes which includes major household appliances such as washers, dryers, refrigerator units, freezers, hot water heaters, and other larger comparable appliances which must be discarded when the useful life of the unit has ended. These materials comprise a little over 2% of the municipal solid waste produced in the United States. The collection, management and disposal of these waste appliances is often difficult due to the bulky nature of the wastes and the inability of most landfills to readily dispose of the materials. In addition, special care must be taken with these items due to the presence of potentially contaminating materials including refrigerants, and PCB’s in the electrical components used in some white goods and other oils and chemicals.



The MDEQ strongly encourages local governments to develop collection programs for local citizens that will recycle or reclaim white goods. The MDEQ believes recycling is the best option for managing discarded appliances. White goods contain many high value metal materials that can be recycled such as steel, aluminum and copper. In developing a white goods recycling program, the local government will need to determine the type of collection system to implement; the manner in which the materials should be stored, processed and removed for recycling; and must acquire the services of a qualified metals collection and salvage company for the ultimate reclamation of white goods collected through the local program. In addition, the local government will need to advise and inform the public of the collection program, including the manner of collection, the location of collection points, the hours of operation and other information necessary to participate in the program.

II. Types of Collection Programs that Local Governments May Consider

These are several types of collection systems or programs which the local government may consider. The local government should select a system that best fits the needs and resources of the community.

- A. Fixed Collection Site(s) – These fixed collection points are selected drop-off sites where individuals may deposit white goods. Generally, these sites should be located adjacent to or on the property of an existing facility where other solid wastes are collected or managed. These locations could include a solid waste

transfer station, recycling center, rubbish disposal site, municipal solid waste landfill or a facility where county/city personnel are located such as a maintenance barn or other public works facility. The site(s) should generally be easily accessible to the public, but also accessible for heavy equipment or larger transportation vehicles which may be brought to the site to collect the materials. In addition, the site should be identified with appropriately sized signage that directs the public on use of the program.

- B. Mobile Collection Program – This type of program involves a mobile collection unit (truck, roll-off dumpster, trailer, etc) which is transported between different locations in the county or municipality to provide residents an opportunity for periodic collection of their white goods. The frequency of transferring the mobile unit will vary, based on the overall needs of the local government and the specific communities involved. This system may also involve the establishment of a central fixed collection point as described in Part II.A above, to which the collected white goods would be brought for long term storage. In addition, increased public advertisement in the area or community to which the mobile unit is transferred will be important to advance public participation and to enhance collection efforts.
- C. Door to Door Collection Program – This type of program involves collection of the white good items from individual residences on some periodic frequency established by the local government. The local government would also have to designate a fixed collection site for deposit of the white goods upon collection. The advantage of this program is that it provides the highest level of service to the citizenry. It is especially helpful for the elderly or disadvantaged who may not have other options for transport of the white goods items. The possible disadvantages are that the operational costs would most likely be significantly higher including labor, transportation, and perhaps specialized equipment costs.
- D. Other Innovative Programs – These programs would include any combination of the above described programs or any other innovative collection programs that local governments may develop. Such programs might involve public/private partnerships with local businesses which already collect white goods in the course of their business operations.

III. Collection Site Operations

Most local governments collect the scrap metal appliances either in large stockpiles or in large containers for direct transport to a metals salvage company. Some communities may bale or otherwise process the white goods themselves; while other communities leave these activities to the salvage company. In managing fixed collection points, local governments should consider the following:

- A. Storage – White goods should be stored in an area that water will not drain through or pond and away from weeds and overgrown vegetation. These items

also should be stored such that the white goods will not hold water in order to prevent the potential for mosquito breeding. In addition, white goods should be stored in a manner that prevents them from falling onto or otherwise injuring members of the public or collection site personnel. Furthermore, the site should be secure and access to the general public should be restricted, unless an attendant is on-site. The white goods containing refrigerant, mercury, oils or other chemicals should be kept separate from those white goods that are free of these chemicals.



At least once a year, accumulated white goods should be removed and transported to a scrap metal dealer for processing. The frequency of removal of the items should be increased, based on the volume of white goods the facility is accepting. There should be sufficient space between white goods storage piles to allow a salvage truck or equipment into the site to remove the materials. The site should be prepared and graded such that incoming removal equipment does not damage the access routes or the white goods storage areas. The metals salvage company must have the proper capability, training and equipment to carry out the processing of the white goods as described in Part B, below, unless the local government elects to train its personnel, and verify certification of its equipment, to conduct such processing.

- B. Processing – Although the scrap metal component of collected white goods requires little or no processing, there are other components found in household appliances that are a potential environmental concern. Processing of the appliances involves separating the 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.

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 also 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 some appliances include mercury and oils.

The following constituents are potential components of certain white goods that may need to be removed:

1. *CFC's and HCFC's* - Before an appliance (such as a refrigerator, freezer, air conditioner, or dehumidifier) can be recycled or disposed of, the CFCs and HCFCs must be removed by certified equipment (40 CFR Part 82, subpart F, § 82.162(c)). A site operator must be prepared to properly remove the refrigerant prior to burying, shredding or dismantling the appliance at your facility. If a site operator chooses to remove and collect

the remaining refrigerant from an appliance at a collection facility, such action must be done in accordance with EPA's safe disposal requirements. You must obtain and properly use refrigerant recovery equipment that has been certified for uses with small appliances or motor vehicle air-conditioners. As the owner of refrigerant recovery equipment you must register or certify that you have obtained refrigerant recovery equipment and that you will comply with the safe disposal requirements. (To obtain a form for equipment certification, go to the following web link: www.epa.gov/ozone/title6/608/recoveryform.pdf.)

2. *PCBs* – Some older appliances (most commonly air conditioners and microwaves, and some refrigerators and freezers) manufactured prior to 1978 contain polychlorinated biphenyls (PCB's) in electrical capacitors. In 1978, PCB containing capacitors were banned from use. However, these capacitors on older appliances should be removed prior to processing. PCBs are most commonly found in a thick oily liquid form and could be released from ruptured capacitors and contaminate large amounts of recyclable materials if the capacitors are allowed to proceed through shredders which separate recyclable metals from plastics and insulation. For more information on PCB disposal, contact the Solid Waste Programs at MDEQ at (601) 961-5171.
3. *Other Chemicals* – Some appliances contain devices or components that contain mercury, oils, or other chemicals. Mercury (found in switches and gauges) and oil (found in transmissions and compressors) should be removed and sent to a recycling or recovery facility, prior to recycling or disposal of the appliance. Mercury can be found in (1) gas pilot –light ranges in the gas pilot assembly, (2) chest freezers with an interior lid light (mercury is in the light socket assembly), and (3) fluorescent lamps that illuminate control panels on the back of some electric ranges and clothes washing machines.

C. Selection of a Collection/Salvage Company – The local government will need to acquire the services of a qualified metals collection and salvage company for the recycling of the white goods collected through its program. The most common method is to contract with one company for both collection and ultimate recycling. However, the local government may choose to use separate collection and salvage companies. A listing of some companies which provide white goods collection services in Mississippi is attached as an appendix to this guidance document. In selecting a contractor, the local government should consider several factors:

1. *The Level of Service Needed.* The local government should evaluate the frequency of collection that is necessary to meet local needs and should ensure that the contractor can comply with the necessary collection

frequency. The local government will want to include flexibility in its contract to increase collection services, if the program participation grows.

2. *Costs of Collection/Salvage Services.* Some metals salvage companies may actually pay the local government for materials that are collected through the program or may provide the collection at no charge to the local government. The ability to collect such payment from the contractor is generally dependent on market conditions for reclaimed metals. The local government may want to seek flexibility in its contract to obtain such payments, as the market conditions allow.
3. *The Expertise, Qualifications or Certification of the Company.* Most local governments choose to allow the salvage company to remove and process the chemicals described in Part III.B from white goods materials, rather than training local personnel to do these tasks. The local government should ensure that the collection/salvage company possesses the necessary qualifications, equipment, and licensing or certification to conduct such removal or processing activities.

- D. Disposal – White goods which cannot be recycled may be disposed of at a permitted municipal solid waste landfill or in certain cases at a Class I rubbish disposal site if free of chemicals and potential contaminants. While there are no current laws in Mississippi that prevent white goods from being disposed of at landfills, the MDEQ discourages landfill disposal of white goods. Many landfills do not have operations or compaction equipment allowing the landfill to dispose of large quantities of the bulky white goods wastes. In addition, the bulky white goods can consume valuable landfill space. However, if landfill disposal is chosen as an option, the collection site operator is responsible for monitoring and ensuring that the refrigerant has been properly removed before an appliance is placed for compaction and burial in a landfill. This confirmation can be accomplished either by verifying the refrigerant removal prior to arrival at the facility or by the site operator removing the refrigerant. Appliances that need to be monitored for refrigerant are those with cooling elements, such as motor vehicle air conditioners, household refrigerators and freezers, window air conditioners, water coolers, vending machines, ice makers and dehumidifiers. These appliances are subject to EPA's safe disposal requirements.

For additional information regarding proper management of solid waste for landfill disposal, you may contact the MDEQ Solid Waste Management Programs at (601) 961-5171 or at the address at the end of this document. Also, for further information regarding the proper disposal of appliances, please visit www.epa.gov/ozone or call EPA's Stratospheric Ozone Information Hotline at 1-800-296-1996.

IV. Solid Waste Assistance Grant Funding

The local government solid waste assistance grants (SWAG) program as established by state law allows funding in part to counties, municipalities, and regional solid waste authorities to establish collection programs for white goods and other bulky waste items. Grant awards are made on a state fiscal year basis. Depending upon the applicant and the type of grant, certain state fiscal year deadlines for submittal of a grant application may apply. In addition, grant award amounts may be limited based on the population of the local government applicant. Grant projects that involve recycling of the collected materials will receive a higher priority. The following information describes the process, eligible program costs and available assistance related to these solid waste assistance grants:

- A. Application Process - Grant funding requests should be made on application forms provided by the MDEQ by the state fiscal year deadlines and should include at a minimum the following information:
 1. A detailed description of the proposed local white goods collection program including the type of collection system, the proposed locations of the collection site(s) and the collection or salvage company proposed to collect the material.
 2. A proposed budget or funding breakdown demonstrating how the requested grant funds will be spent.

- B. Eligible Program Costs For Grant Funding - The MDEQ may consider funding certain costs associated with the white goods collection program. Be reminded that there are limits in state grant regulations on the amount of funds that a local government may apply for based on the size of the community. The eligible costs that can be included in the grant project include but are not limited to the following:
 1. *Collection Site Development or Improvement*
 - a. Site preparation or enhancement including earthwork or construction activity;
 - b. Fencing to control access to collection area(s);
 - c. Trailer/Storage unit costs;
 - d. Roll-off dumpster/collection unit leasing costs.

 2. *Site Operation*
 - a. Transportation costs for collection of the white goods and/or for transport to a recycling/salvage facility;
 - b. Associated labor costs for employees directly involved in white goods management;

- c. Contractual costs for recycling/processing goods (Metal salvage companies may often pay a minimal amount to the local government for salvageable items).
3. *Public Information and Outreach*
- a. Advertising costs (Newspapers; Radio; Television, Utility Bill Inserts) to inform the public of the program or of special amnesty or collection days;
 - b. Brochures, or pamphlets to promote the white goods collection program and proper solid waste disposal;
 - c. Signage to identify the collection site and the operating hours and to instruct the public on site use.
- C. Assistance - Upon request, the MDEQ will provide assistance to any local government in the completion of a solid waste assistance grant application. Contact the grants personnel at MDEQ identified below with any questions or requests for assistance.

For more information on MDEQ's **solid waste assistance grants**, please contact:

Ms. Denise Wilson: (601) 961-5543
Mr. Luis Murillo: (601) 961-5372
Fax No: (601) 961-5785
Solid Waste Policy, Planning and Grants Branch
Mississippi Department of Environmental Quality
P. O. Box 2261
Jackson, MS 39225-2261

Some additional sources of appliance recycling information include:

Appliance Recycling Information Center at 1-800-YES-ICAN (1-800-937-1326),

Steel Recycling Institute at 1-800-876-7274, extension: 2012

Or at www.metalrecyclingdirectory.info

APPENDIX

The following companies have been known to provide white goods collection and/or metals salvage services in Mississippi. This list should not be construed to be a complete listing of all such companies, nor an endorsement of the companies that are listed.

CUMBAA Enterprises
Recycling & Scrap Metal Division
19041 State Road 20 West
Blountstown, FL 32424
(850) 674-8449 or (850) 674-4878

Will collect from local collection site and will remove refrigerant, etc.

Star Recycling
Division of Star Truck Parts
2518 Commerce Way
P.O. Box 170427
Birmingham, AL 35217
(205) 410-9022
Contact – Harry Purnell

Will collect from local collection site and will remove refrigerant, etc.

CSM, Inc.
(Columbus Scrap Material
and Southern Scrap of Meridian
P. O. Box 8670
Columbus, MS 39205
(662) 328-8176
Contact: Robert Craig

Will accept appliances at business location. May negotiate collecting at other sites. Refrigerant will need to be removed.

Dean's Scrap Metal
706 Highway 45 North
Eight Mile, AL 36613
(800) 356-0047, (251) 675-0224
Contact: Oby Dean

Will accept appliances at business location. May negotiate collecting at other sites.

David Motor and Scrap
12360 Hickman Road
Biloxi, MS 39532
(228) 392-6070

*Will accept appliances at business site only.
Refrigerant, etc must be removed.*

Nick Metal and Recycling
11 Hamp Road
Jayess, MS 39641
(601) 222-0280, or (601) 730-0413

Will accept appliances at business site only.

Southern Scrap Recycling -

Will accept non-ferrous metal at business site only.

Gulf Coast LLC
10032 Southpark Drive
Gulfport, MS 39503
(228) 762-8485

Refrigerant must be removed – no sealed units accepted.

L & D Scrap & Trucking
2933 Ellisville Blvd.
Laruel, MS 39440
(601) 425-9411

*Will accept appliances at business site only.
Refrigerant, etc. must be removed.*

Foxworth Recycling
Columbia, MS 39429
(601) 731-1256

Steel recycling (refrigerators, stoves), tin

Tallants Refrigerant, Water & Air
324 North Pleasant Hill
New Hebron, MS 39140
(601) 694-2043
Contact: Milton Burgess, Jr.

Will remove refrigerants from appliances.

Recycling
1314 Forest
Jackson, AL 36545
(251) 247-0101

Will accept appliances at business site only.

Fymuta Metal
65 Arabian Road
Columbiana, AL 35051
(250) 215-8512

Will accept appliances at business site only.

Alter Trading Company
1 Hardwood Lane
Mobile, AL 36611
(251) 457-2140
Contact: Chris Morehouse

*Will accept car bodies, white goods, sheet metal.
Will remove refrigerant on-site.*