

Introduction to Debris Management – 3 Things You Should Know



1) DEBRIS COLLECTION IN YOUR JURISDICTION

Pre-identify waste companies in your jurisdiction

- ✓ Point of contact
- ✓ Coverage area
- ✓ Pickup/operational schedule
- ✓ Is this schedule fixed or flexible during times of emergency?

Capabilities/ limitations

Curbside pickup

Curbside collection parallels normal garbage and trash collection operations. Debris is placed at the curb or public rights-of-way by the residents for collection. (See attached "Separating Your Debris" infographic, page 5)

Collection Center

For debris management purposes, collection centers could be officially designated points such as vacant commercial lots, nongovernmental organization warehouse facilities, governmental warehouse facilities, armories, county fairgrounds, highway / public works maintenance garages, airports, parks and recreation areas, or possibly shopping center parking lots (providing there is written permission from the owner).

Alternatively, Large roll-off bins may be placed on public rights-of-way (ROW) or public property for the residents to bring their debris for collection. This is well suited for rural, sparsely populated areas or logistically difficult conditions where curbside collection is not practical; however, it is not recommended these bins be used in neighborhood areas as they will fill up quickly with potentially non-disaster related debris.

2) CONSIDERATIONS FOR COLLECTION

Considerations for Curbside Collection

Mixed disaster debris

Mixed debris contains two or more types of debris (See "Types of Disaster Debris and Factors Affecting Management" list, pages 3-4) that otherwise could or should be separated. It is the most expensive system for handling cleanup. Materials that could otherwise be separated, reduced, and recycled will end up in a landfill and charged at the given rate.

Source-Segregated

Residents are directed to sort the debris by material type and to place it at the curb in separate piles. Trucks collect debris by type and deliver to respective destination.

Considerations for Collection Centers (See attached layout example, page 6)

Organization of collection center

- ✓ Estimate space required for unloading incoming debris, staging areas, and loading of outgoing debris.
- ✓ Environmental concerns/ permits.

Monitoring

Someone must monitor the staging area, dumpster, and/or curbside. The primary role of the debris monitor is to document the location and amount of debris collected. The monitor should be able to estimate quantities, differentiate between debris types, properly fill out load tickets, and follow all site safety procedures. Monitors must also assist residents in correct placement of debris types.

Reduction of materials

- Incinerations
- Chipping/grinding
- Recycling

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3) FEMA REIMBURSEMENT 101

Public Assistance (PA) (Presidentially declared disasters)

***See FEMA Public Assistance: Debris Removal Tips Fact Sheet*

- FEMA reimburses costs to remove incident-related debris from public property and public rights-of-way (ROW).
- If residents are authorized (by press release, informational flier, such as the one on page 5, etc.) to place incident-related debris on the ROW, costs to remove the debris may be reimbursable.
- Include list of items required to track (*see FEMA PA Fact Sheet*).

Private property debris removal considerations (may not be eligible for PA; prove it is a public health hazard)

***See FEMA Public Assistance: Private Property Debris Removal Fact Sheet*

- Generally, the responsibility of individual property owners.
- Requires written request and FEMA approval.
- Must demonstrate:
 - 1) Applicant's legal authority to maintain the ROW AND
 - 2) provide an authorized determination that disaster-generated debris on private property is an immediate threat to life, public health, or safety, or economic recovery of the community at large.

DOCUMENT THESE ITEMS

Applicants need to document the following information to support debris removal claims:

- Quantity and type of debris:
 - Hauled to a temporary staging site
 - Reduced, including reduction method (e.g., chipped, burned)
 - Hauled to a final disposal site
 - Recycled
- Pick-up locations
- Disposal locations (temporary staging, recycling, and final disposal)
- Owned ("Force Account") equipment:
 - Type of equipment and attachments used
 - Year, make, model, size/capacity
 - Days and hours used
 - Operator name
- Contracted equipment
 - Certifications of truck size/capacity
- Labor:
 - Name
 - Days and hours worked
 - Work performed

Reference Materials

Types of Disaster Debris and Factors Affecting Management

Debris Category	Description	Factors That Can Affect Management
Construction & Demolition (C&D) waste	Components of damaged or destroyed buildings, roads, and other man-made structures, such as lumber, gypsum wallboard, glass, metal, roofing material, tile, carpeting, pipe, concrete, asphalt, utility poles, wires, furnishings, and fixtures. The definition of C&D debris may vary between states and waste management agencies within a state.	May contain materials that must be removed and handled in accordance with federal standards, such as asbestos- containing insulation or tiles or transformers containing polychlorinated biphenyls (PCBs). C&D waste may also be mixed with materials that affect whether the debris can be safely recycled, reused, or burned (e.g., lumber or wood products that are chemically treated or coated with lead-based paint or that contain termites).
Municipal Solid Waste (MSW)	Personal belongings and general household trash.	May be generated in volumes that overwhelm existing landfill capacity or contaminate otherwise non-hazardous wastes.
Vegetative debris	Downed trees, branches, shrubs, and logs.	May require immediate removal when they affect public access routes and critical infrastructure. Often generated in large amounts that can be substantially reduced by burning or chipping. Reduction and reuse options may be limited if contaminated.
Soil, mud, and sand	Earthen material deposited on property and rights-of-way by floods, landslides, high winds, or storm surges.	May be reused as fill on residential or agricultural land. Options for reuse may be limited if contaminated with sewage, pesticides, fertilizers, or other chemicals that make it unsafe for reuse.
Putrescibles	Materials that will rot or decay quickly, such as fruits and vegetables, meats, dairy products, and other produce from grocery stores, restaurants, schools, hospitals, and residences. It can also include animal carcasses, such as pets or farm animals.	May be composted or rendered to reduce volume but must be collected and managed quickly to avoid attracting disease vectors, such as rodents and flies. If not managed quickly, putrescibles may contaminate otherwise benign waste streams.

White goods	Destroyed or discarded household appliances such as refrigerators, freezers, air conditioners, washers, dryers, ovens, ranges, heat pumps, water heaters, and dishwashers.	Can generally be recycled but may contain substances that must be removed according to federal law (e.g., PCB capacitors, ozone-depleting refrigerants, or compressor oils). Refrigerators may be contaminated with putrescibles that must be removed. Proper management may be challenging when white goods are generated in tremendous numbers.
Vehicles and vessels	Cars, trucks, and boats that are damaged, destroyed, or abandoned as a result of the incident.	Can generally be recycled if title and ownership issues are addressed and hazardous fluids or materials (such as motor oil, gas and gas tanks, lead-acid batteries, tires, airbags, and mercury switches) are drained or removed.
Household hazardous waste(HHW)	Household products that contain corrosive, toxic, ignitable, or reactive ingredients, such as motor oil, automobile batteries, paints and solvents, household cleaners and drain openers, swimming pool chemicals, pesticides, and compressed gas tanks (such as propane and oxygen).	The presence of HHW can increase the overall cost of waste management if it is not collected and managed separately. States generally prefer to do so, but it can become mixed with and contaminate relatively benign household wastes.
Electronic Waste (e- waste)	Computers, monitors, televisions, printers, stereos, DVD players, and telephones.	States generally separate electronic waste for recycling because it often contains heavy metals such as lead, chromium, cadmium, mercury, and zinc and brominated flame retardants.
Infectious waste	Waste capable of causing infections in humans, such as contaminated animal waste, human blood and blood products, medical and pathological waste, and discarded sharps (needles, scalpels, or broken medical instruments).	It may become mixed with and/or contaminate otherwise benign waste and pose a risk to waste handlers unaware of its presence.
Commercial or industrial hazardous waste	May include petroleum or other hazardous substances that pose significant risk to human health, safety, or the environment released from above ground or underground storage facilities or containers (tanks or drums) or from commercial or industrial facilities (e.g., gas stations or dry cleaners).	May become mixed with and/or contaminate otherwise benign waste. May contaminate surface or groundwater if not quickly contained, cleaned up, and properly managed.

Source: FEMA's [2018 Public Assistance Program and Policy Guide, Appendix D: Debris Management Plan Job Aid, April 2018](#), and EPA's [Guidance about Planning for Natural Disaster Debris, March 2008](#).

Separating Your Debris

Debris should be placed curbside, without blocking the roadway or storm drains.

NO PICKUP ZONE

Any debris placed from the sidewalk toward your property will not be picked up.

DEBRIS SEPARATION

Separate debris into the six categories shown below.

DO NOT STACK OR LEAN

Placing debris near or on trees, poles, or other structures makes removal difficult. This includes fire hydrants and meters.

UNSURE WHERE TO PLACE DEBRIS?

If you don't have a sidewalk, ditch, or utility line in front of your house, place debris at the edge of your property before the curb.



Normal Household Trash
Normal household trash and bagged debris of any kind will not be picked up with this program. You should continue to follow your normal garbage removal schedule.

VEGETATIVE DEBRIS
(do not put in bags)

- Plants
- Logs
- Tree branches

CONSTRUCTION & DEMOLITION DEBRIS

- Building materials
- Carpet
- Drywall
- Furniture
- Lumber
- Mattresses
- Plumbing

APPLIANCES & WHITE GOODS

- Air conditioners
- Dishwashers
- Freezers
- Refrigerators
- Stoves
- Washers, dryers
- Water heaters

ELECTRONICS

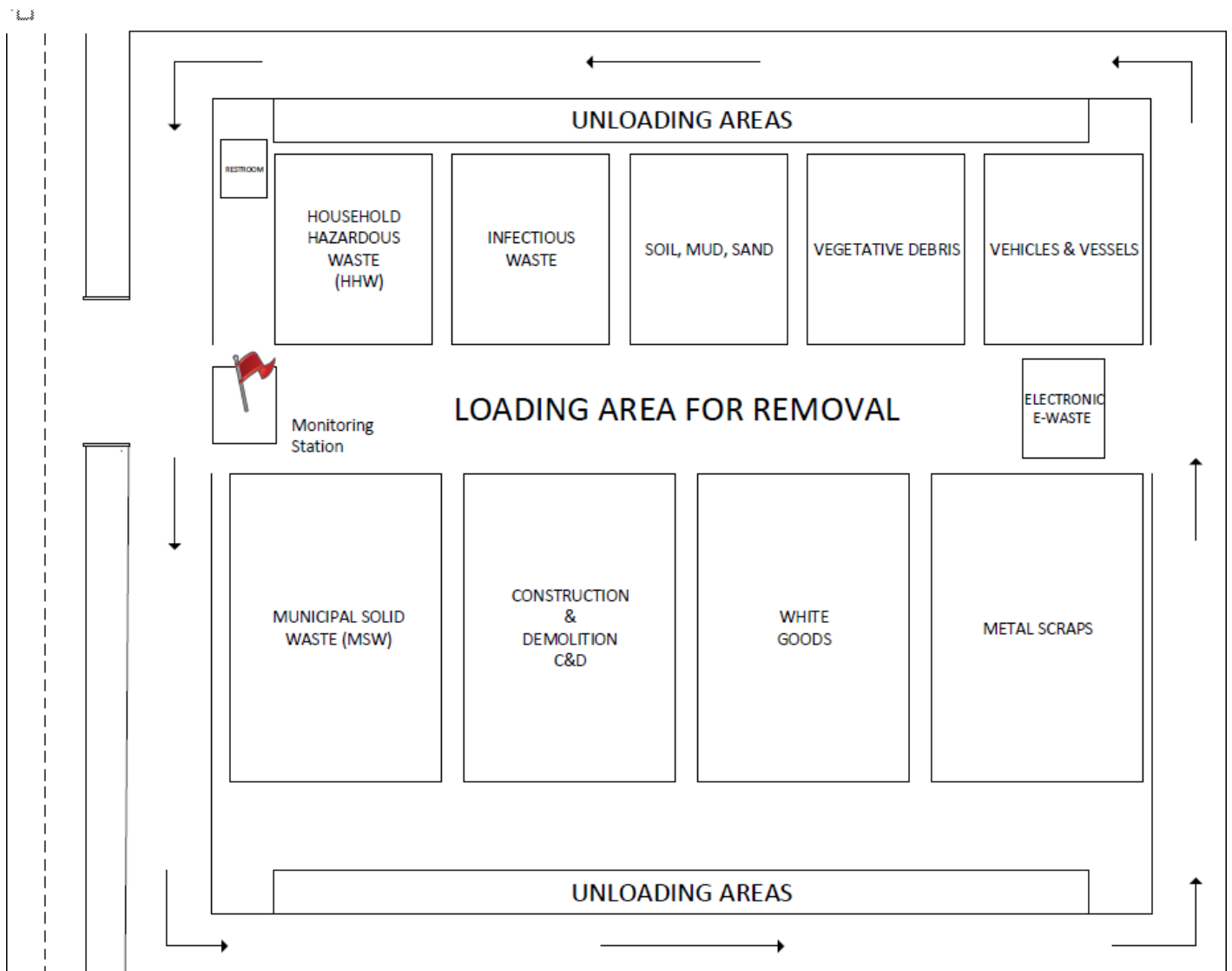
- Computers
- Radios
- Stereos
- Televisions
- Other devices with a cord

HOUSEHOLD HAZARDOUS WASTE

- Cleaning supplies
- Batteries
- Lawn chemicals
- Oils
- Oil-based paints and stains
- Pesticides



Collection Center Layout Example



For Additional Information:

[Public Assistance: Debris Removal Tips Fact Sheet](#)

[Public Assistance: Private Property Debris Removal Fact Sheet](#)

[Public Assistance: Debris Management Guide](#)