

Disaster Debris Removal Resources



OFFICE OF EMERGENCY
RESPONSE
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Types of Debris

Vegetative Debris	<p>Trees, trunks, branches, limbs, and other leafy material. These are often categorized into the following groups:</p> <ul style="list-style-type: none">• Hazardous Trees (Leaners) – 50% of the crown is missing or destroyed and the heartwood exposes twisting.• Hazardous Limbs (Hangers) – broken limbs larger than 2 inches in diameter at the break.
Hazardous Stumps	<p>Stumps that are larger than 24 feet in diameter and show at least 50% of the root ball exposed and uprooted. They pose a significant risk as anything under the hazardous stumps may be harmed.</p>
Construction and Demolition Debris (C&D)	<p>Parts of building structures, to include carpeting, lumber, roofing, etc. This definition may vary between jurisdictions.</p>
Household Hazardous Waste (HHW)	<p>This is waste that the residential consumer disposes of as opposed to industrial or commercial consumers. This can include pesticides, paints, and other things that may be explosive, corrosive, or toxic.</p>
Hazardous Waste	<p>Title 40 part 261 dictates that waste that exhibits one of the four characteristics below is classified as potentially harmful to human health or the environment. The characteristics are as follows:</p> <ul style="list-style-type: none">• Ignitability• Corrosivity• Reactivity• Toxicity
White Goods	<p>Household appliances that have been discarded such as washing machines, freezers, refrigerators. These contain ozone-depleting refrigerants, mercury, or compressor oils that can be harmful if not disposed of properly. The Clean Air Act restricts the release of these refrigerants into the atmosphere.</p>
Electronic Waste (E-Waste)	<p>Electronic Waste is electronics that contain materials that are hazardous and can include cell phones, batteries, computer monitors and more.</p>

Types of Debris

Soil, Mud, and Sand	Movement of water and winds can create deposits of soil, sand, and mud on improved public property. This usually impacts sidewalks, sanitary sewers, drainage canals, and public swimming pools.
Vehicles and Vessels	Vessels are often damaged, destroyed, or relocated after a disaster. Sometimes these are abandoned or the owner of the vehicles and/or vessels may have relocated. These are potentially a hazard if they block public access or public facilities. It must be in the public interest to remove these vessels or vehicles.
Putrescent Debris	This includes any debris that will decompose or rot. An example would be animal carcasses, unrefrigerated meat and other kinds of fleshy organic matter. There are specific guidelines for the disposal of these materials.
Infectious Waste	Infectious Waste is materials that may cause infections in humans such as medical waste, contaminated animal waste, blood medical waste, or other. The removal of infectious waste may be within the jurisdiction of another federal agency in the case of a federally declared disaster.
Chemical, Biological, Radiological, and Nuclear-Contaminated Debris (CBRN)	CBRN is debris that has been contaminated by chemical, biological, radiological, or nuclear materials. These materials can have lingering long-term effects. Guidelines for the removal of this type of debris may depend on disaster-specific guidance.

For further information and guidance on these types of debris, please review Appendix D of [FEMA's Public Assistance Program and Policy Guide \(V3 2018\)](#).

Pre-Disaster Debris Activities

- ▶ Establishing a Debris Management Plan
 - ▶ [FEMA's Public Assistance Program and Policy Guide](#), provides a job aid for creating a comprehensive debris management guide. They identify 10 key components to include for a comprehensive debris management plan.
 - ▶ FEMA also provides a “one-time 2 percent increased cost-share incentive for a FEMA-accepted debris management plan with pre-qualified debris removal contractors before the start of the incident period,” (PAPPG, 46).
 - ▶ The Florida Division of Emergency Management provides guidance for [Planning for Debris Management Operations](#) which also includes FEMA's [Debris Management Planning Workshop Student Handbook](#).
- ▶ Debris Estimates
 - ▶ For estimating the amount of Debris from a given event, FEMA provides guidance through their [Debris Estimating Field Guide](#).
 - ▶ Preliminary Damage Assessments are conducted after an event to estimate the scope of debris removal operations.
- ▶ Disaster Debris Management Sites
 - ▶ Disaster Debris Management Sites function as an intermediate staging area between the initial removal and the disposal or recycling of the debris.
 - ▶ The Florida Department of Environmental Protection recommends that prior to an event, disaster debris management sites are pre-determined. This expedites the debris removal process during an emergency. More guidance can be found [here](#).
 - ▶ Florida Division of Emergency Management also provides guidance on [Environmental Considerations and Debris Management Site \(DMS\) Approval](#). They also outline which measures should be taken prior to approval from FDEP [here](#).



Disaster Debris Reporting

▶ Debris Estimating

- ▶ Prior to a disaster, each local, state, and tribal territory estimates the amount of debris that a disaster may produce. The estimate can be based on previous events, the time since the last event, and other factors. This allows applicants to estimate their costs pre-disaster.

▶ Preliminary Damage Assessments

- ▶ After an event, preliminary damage assessments are conducted. These assessments allow applicants (which include state, local, and tribal governments) to determine the extent of damage from a particular event. These assessments help to determine whether the damages from an event exceeded the local capacities, then the state capacities, and whether they are eligible for federal reimbursement.
- ▶ In the debris removal processes, these damage assessments allow stakeholders to know the location and severity of debris that may be eligible for removal. These assessments also help applicants determine what resources they will need to seek out for disaster debris removal.

▶ Debris Removal Recording

- ▶ Once the removal process has been completed, the final amount removed is recorded. This quantitative data is what an applicant's reimbursement amount is based off of.

Disaster Debris Reporting

- ▶ The Florida Division of Emergency Management uses an online survey to allow individuals to report any additional disaster debris that may be eligible for removal.
- ▶ This online survey includes location, debris type, contact information for the reporting party, as well as photos.
- ▶ The survey can be found [here](#).

Debris Reports Form



Note:
This is a survey form for reporting debris to the [State Emergency Response Team](#).

Application Disclaimer: The size limit for each photo attachment is 10MB. Please reduce your camera's pixel size to reduce the file size of your photo attachment before posting if it exceeds this limit. In addition, the application allows multiple photos to be attached to a submission so long as the size limit is not exceeded for each attachment.

Previously submitted debris locations may be viewed [here](#).

Type of Debris*

County*
Address*
City*

Debris Reduction Recycling & Disposal



- ▶ Disposal of Disaster Debris must be done in the most efficient and cost-effective manner.
- ▶ Disaster Debris Management Sites are temporary staging areas for processing of debris before it's final disposal.
- ▶ Acceptable methods of debris reduction and recycling are as follows:
 - ▶ Incineration
 - ▶ Chipping & Grinding
 - ▶ Recycling

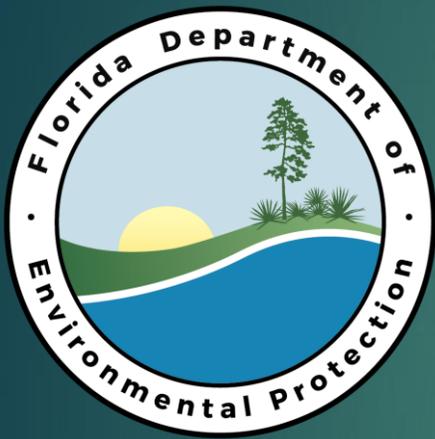
Unofficial Lead for Debris Removal*

Debris Type	Lead Entity
Debris on Public Land	Responsible Public Property Owner (ie: City, County, State, Fed)
Debris on Private Land	Responsible Private Property Owner
Florida Wildlife Management Areas	Florida Fish and Wildlife Conservation Commission
State Parks / State Land	Florida Department of Environmental Protection's Division of State Lands
Debris on DOT Right of Way	Florida Department of Transportation
Debris in State Waters	Florida Department of Environmental Protection's Division of State Lands
Debris in Creeks	Responsible Public Property Owner (ie: City, County, State, Fed)
Debris in Lakes	Responsible Private or Public Property Owner (ie: City, County, State, Fed)
Man Made Canals	Responsible Private or Public Property Owner (ie: City, County, State, Fed)
Federally Maintained Navigable Channel	US Army Corps of Engineers
Shoreline (Wet Sand)	Department of Environmental Protection's Division of State Lands
Dunes and Shoreline (Dry Sand)	Responsible Private or Public Property Owner (ie: City, County, State, Fed)
Natural Canals	Responsible Private or Public Property Owner (ie: City, County, State, Fed)
Vessels on Land	Responsible Private or Public Property Owner (ie: City, County, State, Fed) / Florida Fish and Wildlife Conservation Commission
Vessels in the Water	Florida Fish and Wildlife Conservation Commission / US Coast Guard
Household Hazardous Waste (HHW)	Responsible Private or Public Property Owner (ie: City, County, State, Fed)
Hazardous Materials	Environmental Protection Agency / Florida Department of Environmental Protection's Office of Emergency Response

* This above is neither an exhaustive list nor imposes liability on these entities. Depending upon circumstances, other entities may be responsible

State of Florida Resources

The Florida Department of Environmental Protection



Various programs within DEP help coordinate aspects of debris. While the [Office of Emergency Response](#) is the lead emergency coordinator for Emergency Support Function 10, Hazardous Materials, DEP's [Division of State Lands](#) is responsible for the waterway debris removal function on those designated state lands. DEP's [The Division of Waste Management](#) also plays a role in coordinating Household Hazardous Waste removal and designating Disaster Management Sites (DMS).

[Post-Storm Guidance for Debris in State Owned Waterways](#)

[Guidance for Designating Debris Management Sites](#)
[Management of Hazardous Waste](#)

The Florida Division of Emergency Management's (FDEM) State Emergency Response Team (SERT)



[FDEM](#) is responsible for producing and maintaining the [Comprehensive Emergency Management Plan \(CEMP\)](#) for the State of Florida. Therefore, they are the chief agency for coordinating recovery efforts to include debris removal. Further guidance can be found at their website [here](#). Additionally, The Division provides training opportunities for Debris Removal Operations (G-202) through [SERT TRAC](#).

[Debris Removal Quick Guide](#)
[FDEM Debris Issues](#)

State of Florida Resources



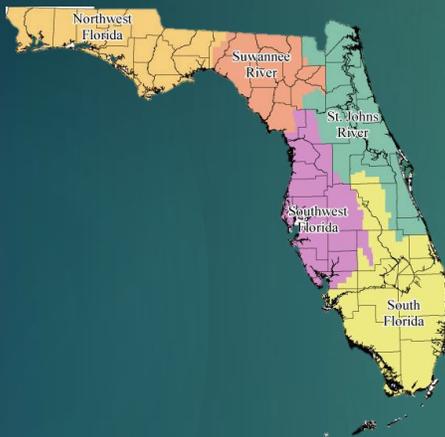
Florida Department of Transportation (FDOT)

FDOT has an [Emergency Management Office](#) that responds to emergencies in conjunction with the State Emergency Response Team. In the process of debris removal, FDOT performs a category of emergency work known as “[Cut & Toss](#).” This process is the cutting or tossing of debris to clear the roadways for vehicular traffic.

Debris Removal Scope of Services

Florida Water Management Districts

Supervised through the Department of Environmental Protection’s [Office of Water Policy](#), the Water Management Districts are means to manage the state’s water resources. These Management Districts are tasked with coordinating with the appropriate federal agencies for debris within their jurisdictions. This typically includes any canals that are their responsibility. Further information can be obtained by contacting the [Water Management District Offices](#).



Florida Fish and Wildlife Conservation Commission (FWC)

[FWC](#) performs the removal of derelict, sunken, and abandoned vessels. After a disaster these can be navigational hazards as well as hazards to further debris removal operations. For further information, visit [their website](#).



Additionally, FWC has an [interactive map](#) tool on their website to show all of the derelict vessels in Florida.

Federal Resources

Federal Emergency Management Agency (FEMA)



FEMA

FEMA provides financial assistance for disaster debris removal through their Public Assistance Program. Funding is limited to removal in the public interest that poses and immediate threat to life and safety. Further details can be found in Public Assistance Program and Policy (PAPPG). FEMA also provides training resources through the Florida Division of Emergency Management for managing debris operations.

[Public Assistance Program and Policy Guide \(PAPPG\)](#)
[Public Assistance Debris Removal Tips](#)
[Top 10 FEMA Grant Procurement Mistakes](#)
[Debris Removal from Private Property](#)

The U.S. Coast Guard (USCG)



The [USCG Navigation Center](#) provides environmental and emergency response through their [National Response Center \(NRC\)](#). When there are navigational hazards, the USCG will broadcast on VHF channel 16 a “[Local Notice to Mariners](#),” to warn them of navigational hazards.

The USCG also provides supplemental support to FWC for vessels in the water and debris in natural canals.

The U.S. Army Corps of Engineers (USACE)



The [USACE](#) is the federal agency responsible for the maintenance of federal navigable waterways and turning basins. This is an effort that is coordinated through local governments and the USACE District Offices.

[Jacksonville District](#)
[Mobile District](#)

Additional Resources and Maps

- ▶ The Florida Department of Environmental Protection produces a GIS map that contains the locations of reported debris. It can be found [here](#).
- ▶ The tool includes a key along with geographic locations and photos to assist with debris removal coordination. Users can also attach photos that will be displayed on the map.

Legend

Debris Survey Results

-  Appliances (White Goods)
-  Construction and Demolition
-  Electronic
-  Hazardous Waste
-  Mixed
-  Other
-  Personal Property
-  Sediment (Soil, Mud, Sand)
-  Vegetation
-  Vehicles
-  Vessels
-  Waterway

Debris Photos

