



# Disaster Debris Management Sites





## What is a DDMS?

- A Disaster Debris Management Site (DDMS) is a temporary staging area for disaster debris
- Disaster debris includes construction and demolition waste, yard waste and mixed debris



## Who Needs a DDMS?

- Hopefully no one will need one, but it is best to be prepared
- DDMSs should be requested by cities, counties, or other government agencies
- May be requested by contractors performing debris management for the city, county or government agency



# Today's Topics

1. Types of Waste Managed at a DDMS
2. Selecting a Location
3. Requesting an Authorization



## Types of Waste

- Yard waste debris (uncontaminated natural growth trees, bushes and shrubs, etc.)
- Construction and demolition (“C&D”) debris (building materials – roofing, siding, drywall, windows, interior fixtures such as cabinets, countertops, drawers, etc.)
- Class III waste (furniture)
- Ash (from controlled burning of yard wastes)
- Mixed waste debris (i.e. C&D mixed with yard waste debris)





# Types of Waste

Items that need special handling and may require additional authorization:

- Boats
- Vehicles
- White goods
- Power poles
- Power lines





## Selecting a Location

- Vegetative waste
  - 100 feet from potable wells
  - 50 feet from water, including wetlands
- Construction and demolition waste or mixed debris
  - 500 feet from potable wells
  - 200 feet from water, including wetlands





## Selecting a Location

- Decide where site needs to be geographically
- Some ideas to consider
  - Ball fields
  - Parks
  - FDOT staging areas
  - Parking lots





# Selecting a Location

## Areas to Avoid

- Gopher Tortoise
- Wetlands
- Historical Sites
- Flood Plains
- High Water Table
- Active Community Centers
- Near Schools
- Residential Areas
- Medical Centers
- Playgrounds
- Rivers









Dog Island

FERRY

Legend

Barge Landing and Loading site

White Goods

200'

100'

Island and ferry traffic

Debris hauling route

Burn pile

Vegetation

C&D pile

Google Earth

© 2018 Google



200 ft





## Selecting a Location

- If any prehistoric or historical artifacts, vessel remnants associated with Native American cultures, early colonial or American settlement, or maritime history are encountered in site evaluation, or at any time prior to, during or after use, ALL potential and actual activities associated with each site ***MUST CEASE***. The Florida Department of State, Division of Historical Resources, Compliance and Review Section must be immediately notified at (850) 245-6333.





## Selecting a Location

Here's our mapping system that has a great deal of information:

<https://ca.dep.state.fl.us/mapdirect/?focus=standard>

- There is a layer showing existing solid waste sites
- There is also a wetlands layer that DEP uses for review purposes as an indicator of wetlands, but this is not conclusive







# Requesting an Authorization

## Guidance for Establishment, Operation, and Closure of a Disaster Debris Management Sites (paragraph 6);

Requests for authorization of DDMSs should be made by a local, state or federal government official responsible for disaster debris management within the jurisdiction (e.g., county, city, DOT District, school district, etc.) where the DDMS is located. Such DDMSs do not need to be owned by the government but must have oversight by the government with jurisdiction (or it's designated contractors). The government that requested the DDMS will have ultimate responsibility for compliance with statutes and rules.





# Requesting an Authorization

Business Portal for Pre-authorizations:

<http://www.fldepportal.com/go/>

- Submit
- Renewal
- Disaster Debris Management Site Pre-Authorization

Or contact our NWD District Office at 850-595-8300



## Requesting an Authorization

- When you renew through the portal, we get a notification and an inspector will be assigned the site.
- The inspector will conduct a site visit and issue an inspection report to the requesting authority.
- The inspector may contact you prior to the site visit to gain entry if needed.



# Requesting an Authorization

## What to submit:

- Aerial map showing the site and where waste will be placed on the site as well as what types of waste
- Latitude and longitude
- Possibly the contract granting you the authority to request the site
- Operational plan



# River Road Site

Load Tower

Ingress/Egress

Veg Derbis

C and D









# Requesting an Authorization

**The operational plan should describe, as applicable:**

- **Function of the site – management of debris, processing of debris, or both**
- **Type of processing that will be conducted**
- **Types of wastes that will be managed**
- **Process for managing unexpected or unauthorized waste**
- **Entities that are authorized to bring debris to the site**
- **Location where site records will be kept**
- **Days and hours of operation**





## Requesting an Authorization

**We encourage submission prior to emergencies**

- **Pre-authorization** - reviewed and approved prior to hurricane season – allows for quicker authorization of the DDMS and promotes pre-planning in the event of a disaster.
- **Authorization** – issued immediately to all pre-authorized sites and then for each new site requested after the issuance of an emergency final order.



## **DDMS Approval**

- Each emergency situation is different and we will react accordingly.
- Whatever the emergency, we will be available and will have a system in place to provide whatever services we can.



## DDMS Approval

- The authorization is granted under 403.7071(2) F.S.
- The Authorization goes out in an email to the contracting authority





**Russell Sullivan**

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The background image shows a large-scale disaster debris management site. In the foreground, there is a chain-link fence. Behind the fence, a large, dark, muddy area is visible, possibly a pond or a large pile of debris. In the background, there are large mounds of brown, fibrous debris, likely palm fronds or similar organic material. Further back, there are some trees and a small building under a cloudy sky.

# **Operation Requirements for Disaster Debris Management Sites**





# Hurricanes

- Hurricanes and debris generation
- Compliance considerations
- Air Curtain Incinerators and Open Burning
- Compliance Examples



# Hurricanes

- Hurricane Categories
  - 1 – 74 to 95 MPH winds
  - 2 – 96 to 110 MPH winds
  - 3 – 111 to 129 MPH winds
  - 4 – 130 to 156 MPH winds
  - 5 – 157 MPH winds or higher





# Hurricanes

- Hurricane wind speed is measured according to World Meteorological Organization's and U.S. National Weather Service's specific standards.
- Wind speed is measured at 33 feet for 10 minutes and then averaged or one minute in the US.
- Some sources vary on wind speeds in each hurricane category.



# Hurricanes

- **Category 1** hurricanes usually cause no great damage to permanent structures.
- **Category 2** hurricanes may inflict damage on poorly constructed homes, signs, trees, and piers.
- **Category 3** hurricanes are considered major and are expected to cause devastating damage and affect structural damage to mobile homes and gable end roofs.





# Hurricanes

- **Category 4** hurricanes are expected to cause catastrophic damage and complete failure of some structures (gas station canopies) including flattening of mobile homes. Utility losses are expected to last weeks.
- **Category 5** hurricanes may cause complete roof failures and complete structural failure on most structures within 3-5 miles of the coast. Also expected to uproot and snap trees.



# Hurricane Michael

- National Oceanic and Atmospheric Administration's National Hurricane Center recently determined that Hurricane Michael had a wind speed of 160 MPH when it made landfall just tipping the scale into a Category 5 hurricane.





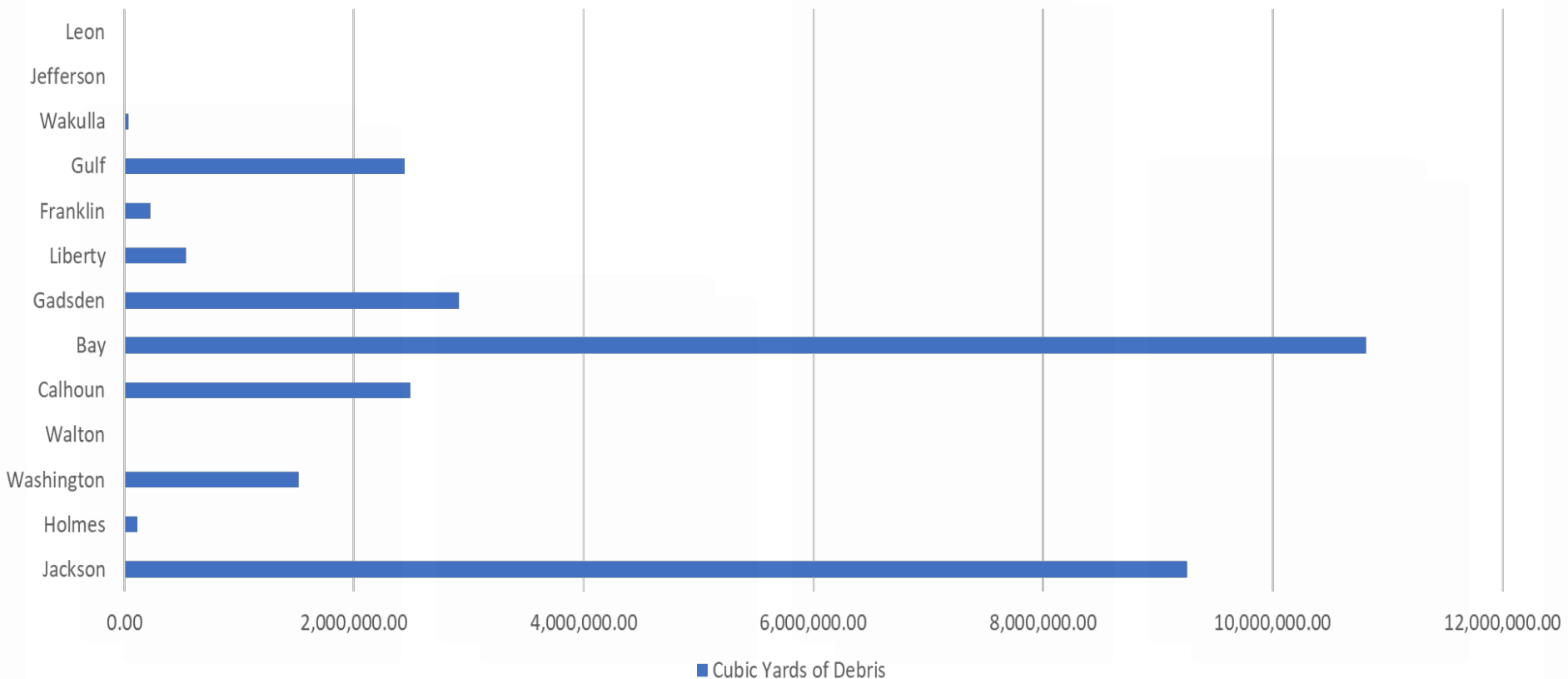
## Hurricane Michael

- Hurricane Michael hit Mexico Beach.
- Insurance Journal reported on April 22, 2019, that the pre-storm population of 1200 residents and 2700 housing units had been reduced post storm to 400 residents and 500 structures standing.



# Removed Debris as of May 10, 2019

Cubic Yards of Debris







# Hurricane Michael

- As of May 20, 2019, 30,366,663.48 cubic yards of waste has been picked up
- For comparison, there are 4,360,000 cubic yards of concrete in the Hoover Dam
- That's 6.96 Hoover Dams, and counting



# Hurricanes

- Hurricane Andrew was the last category 5 hurricane to hit Florida in August 1992
- Andrew made landfall in Miami and had wind speeds of 165 MPH
- Various sources say 20 million cubic yards of debris was generated





## Compliance Considerations

1. What types of waste are managed?
2. Is the waste being stored or processed in surface water or wetlands?
3. Does the site have stormwater controls?
4. Does the site have a method to control offsite migration of dust, wood chips, or ash?
5. Does the site have access controls?



## Compliance Considerations

6. Does the site have enough spotters?
7. Is unauthorized waste segregated and removed?
8. Is burning in accordance with 403.7071(6), F.S.?
9. Is the site operating in accordance with plans?





# **Compliance Considerations**

## **“Guidance for Establishment, Operation, and Closure of DDMSs”**

**In accordance with National Fire Protection Association, mulch and chip piles should not exceed 25 feet in height, 150 feet in width, and 250 feet in length. A clear space of not less than 15 feet shall be maintained between piles and exposing structures, yard equipment, or stock, and piles should be subdivided by fire lanes having at least 30 feet of clear space at the base around each pile. These piles should not be compacted.**



# This is Processing in Water







# This is Stormwater Control







# Hard to Control Migration







# Fence, Gate or 24 Hr Site Presence?







# Do You Have Enough Spotters?







# Are You Segregating Wastes?







# Improper Operation







# Correct Operation





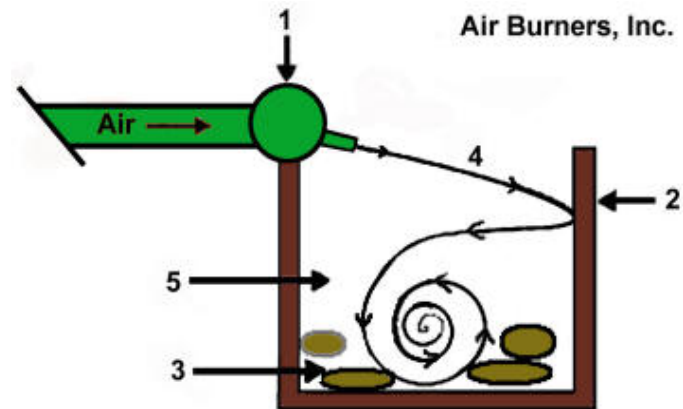
# Incinerator Not Running Correctly







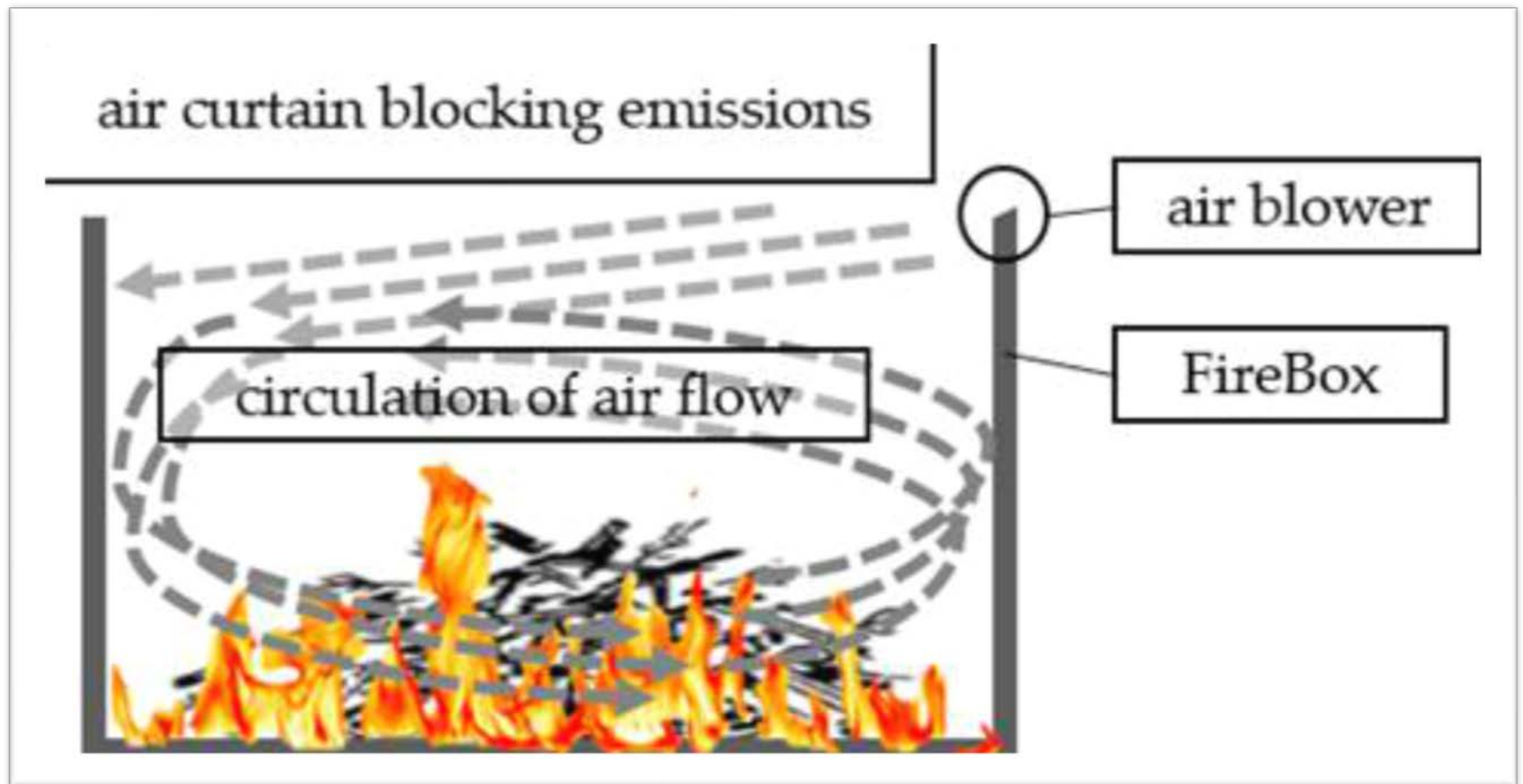
# Air Curtain Incinerators



1. High velocity air directed across and angled into the pit
2. Refractory lined wall or earthen wall
3. Waste material to be burned
4. High velocity air "curtain" over fire
5. Continued air flow over-oxygenates fire accelerating combustion process



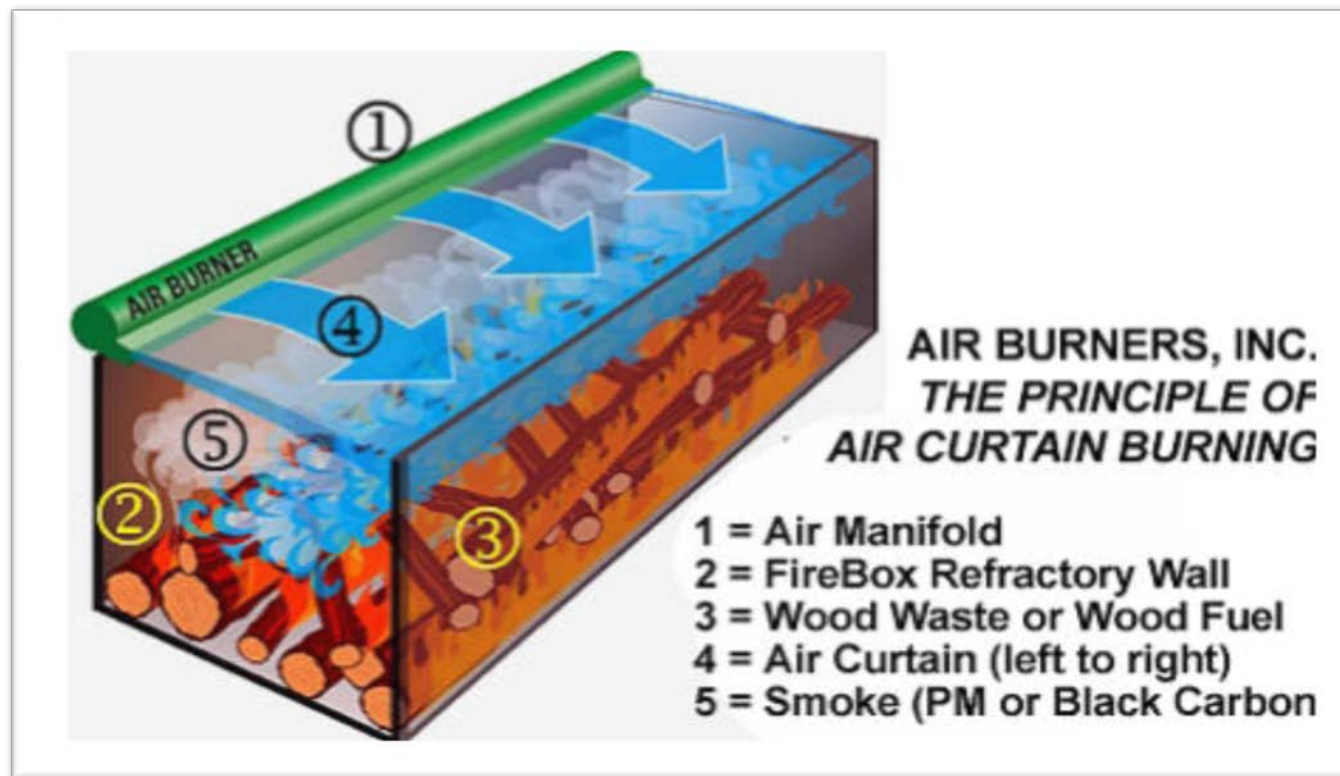
# Air Curtain Incinerators







# Maintaining an Air Curtain





## Types of Air Curtain Incinerators



- Can be constructed above or below ground
- With or without refractory walls and floor





# Improper Pile Burning





# Improper Pile Burning







# Air Curtain Burning

- The pit walls (width and length) shall be vertical, and maintained
- The following dimensions for the pit must be strictly adhered to:
  - No more than **12** feet wide
  - Must be **8** to **15** feet deep
  - No longer than the length of the manifold
- Waste shall not protrude above the air curtain and ash shall not be allowed to build up to impede combustion. Unless the ACI has refractory-lined walls, charging cannot begin earlier than sunrise and end no later than **1** hour after sunset



## Air Curtain Burning

- Refractory-lined air curtain incinerators may operate 24 hours per day. Air curtain incinerators without refractory-lined walls may operate 24 hours per day provided reasonable efforts are made to prevent nuisance smoke.
- Must be at least 300 feet from occupied buildings, 50 feet from wildlands, brush, and structures, or paved roadway and shall be attended while materials are being burned.
- The burning of asbestos or any other material in Rule 62-256.300, F.A.C., is prohibited.
- Authorization must be obtained daily from the Florida Forest Service within the Department of Agriculture and Consumer Services prior to burning using an air curtain incinerator.





## Air Curtain Burning

- For ACI's smoke levels must not exceed 35% opacity during the first 30 minutes of startup and 10% opacity after startup.
- Notification must be sent to DEP within 10 days of startup of an ACI; and again if operating for more than 8 weeks. An ACI operating in an emergency area for longer than 6 months must obtain a department issued air permit.



## Open Pile Burning

- Must be at least 300 feet from an occupied building, 100 feet from paved public roadway, and 50 feet from any wild lands, brush, or combustible structure and shall be attended with adequate fire extinguishing equipment available at all times.
- Authorization must be obtained daily from the Florida Forest Service within the Department of Agriculture and Consumer Services.





## Open Pile Burning

- Only vegetative material can be burned and is managed under the authority of the Florida Forest Service. The Department will defer to them provided that burning does not occur in wetlands or other surface waters.
- Open pile burning shall avoid affecting wetlands and other surface waters to the greatest extent possible and any wetland or other surface water areas used or affected must be fully restored upon cessation of use of the area in consultation with the Department.
- Open pile burning may be conducted unless prohibited by local ordinance.





**Operating in Accordance with Approved Plans?**







## Other Examples of Concern







**Notice the Neatness of this Site**







## Other Examples of Concern







# Other Examples of Concern







# Are There Any Spotters?







**Russell Sullivan**

**850-595-0575**

**[Russell.Sullivan@FloridaDEP.gov](mailto:Russell.Sullivan@FloridaDEP.gov)**





# Disaster Debris Management Sites Extensions and Closures



## Topics for Discussion

- Extending a DDMS authorization
- Closing the site
- Extension example
- Order example





# Extensions

- What is an extension?
- When is an extension needed?
- How to request an extension



## What is an Extension?

- An extension may be issued extending the Emergency Final Order, OR the extension may be issued for a specific DDMS authorization
- If the Order isn't extended, the department may grant individual 30 day extensions on a case-by-case basis





# An Emergency Final Order

## STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

In re:

**EMERGENCY AUTHORIZATION FOR  
REPAIRS, REPLACEMENT,  
RESTORATION, AND CERTAIN  
OTHER MEASURES MADE NECESSARY  
BY HURRICANE MICHAEL**

**OGC NO. 18-1335**

### **FOURTH AMENDED AND RESTATED EMERGENCY FINAL ORDER**

Under Sections 120.569(2)(n), 252.36 and 252.46, Florida Statutes, and upon consideration of the State of Florida Executive Order Nos. 18-276, 18-277, 18-360, 19-33 and 19-98 and the following findings of fact, the State of Florida Department of Environmental Protection (Department) enters this Fourth Amended and Restated Emergency Final Order (Order), including Findings of Fact and Conclusions of Law, in response to the imminent or immediate danger to the public health, safety, and welfare of the citizens of the State of Florida caused by Hurricane Michael (hereinafter "Hurricane"). This Fourth Amended and Restated Emergency Final Order restates, amends and extends the provisions of the Emergency Final Order issued on October 8, 2018 and amendment issued on November 9, 2018, December 6, 2018, and February 1, 2019.

### **FINDINGS OF FACT**

1. On October 8, 2018, Hurricane Michael formed off the coast of Mexico and headed northward into the Gulf of Mexico strengthening rapidly as it approached the Florida Panhandle. On October 10, 2018, Hurricane Michael made landfall near Mexico Beach, Florida as a Category 4 Hurricane and one of the most intense Atlantic hurricanes to make landfall in the United States with maximum sustained winds of approximately 155 miles per hour. The Hurricane brought dangerous storm surge, rainfall, strong winds,

hazardous seas, and tornadic activity for portions of Florida's northern Gulf Coast. The Hurricane caused widespread damage within the following counties: Okaloosa, Walton, Holmes, Washington, Bay, Jackson, Calhoun, Gulf, Gadsden, Liberty, Franklin, Leon, Wakulla, and Jefferson, which shall constitute the specific area covered by this Order. This area shall herein be referred to as the "Emergency Area."

2. By State of Florida Executive Order Nos. 18-276, 18-277, 18-360, 19-33, and 19-98 the Governor declared that a state of emergency exists throughout Okaloosa, Walton, Holmes, Washington, Bay, Jackson, Calhoun, Gulf, Gadsden, Liberty, Franklin, Leon, Wakulla, and Jefferson, counties, based upon the serious threat to the public health, safety and welfare posed by the Hurricane.

3. The Department finds that the Hurricane creates a state of emergency posing an imminent danger to the public health, safety, welfare and property throughout the Emergency Area. As a result of the emergency, immediate action by Florida's citizens and government may be necessary to repair, replace and restore structures, equipment, surface water management systems, works, and other systems damaged by the Hurricane.

4. The Department finds that an emergency authorization is required to address the need for immediate action because the normal procedures for obtaining the necessary authorizations would not result in sufficiently timely action to address the emergency.

5. The Department finds that immediate, strict compliance with the provisions of the statutes, rules, or orders noted within this Order would prevent, hinder, or delay necessary action in coping with the emergency, and that the actions authorized under this



# What is an Extension?

Sullivan, Russell

**From:** FDEP GENERATED LETTER (DO NOT REPLY) <donotreply@dep.state.fl.us>  
**Sent:** Monday, May 6, 2019 4:56 PM  
**To:** erica.brookman@dot.state.fl.us  
**Cc:** Sullivan, Russell; Fetrow, Chad; frederick.dickinson@em.myflorida.com; Aldridge, Jason H.; Templin, Dawn; timothy.parsons@dos.myflorida.com; Epost\_NwdwasteAir  
**Subject:** Debris Management Site Authorization Letter - WACS ID 97869, Michael (Sent By: sullivan\_r)



FLORIDA DEPARTMENT OF  
 ENVIRONMENTAL PROTECTION  
 Northwest District Office  
 160 Governmental Center  
 Pensacola, Florida 32502-5794

Ron DeSantis  
 Governor

Jeanette Nuliez  
 Lt. Governor

Noah Valenstein  
 Secretary

Sent via email to: erica.brookman@dot.state.fl.us

Date: 5/6/2019

Erica Brookman  
 1074 Highway 90  
 Chipley, FL 32428

RE: Disaster Debris Management Site (DDMS) Extension Authorization - Michael

Dear Erica Brookman,

In accordance with the Emergency Final Order OGC No. 18-1335 (the Order), which was executed on 10/8/2018, the Department may issue field authorizations for disaster debris management sites (DDMS) to be used for temporary storage and processing of disaster debris. Disaster debris includes hurricane/storm-generated debris and all other types of disaster debris. The Order also gives the Department authority to include specific conditions in the field authorizations for the operation and closure of a DDMS, which may delineate a required closure date that extends beyond the expiration of the Order. A copy of this Order may be obtained from the DEP website <http://www.dep.state.fl.us/mainpage/em/info.htm>

The Department has evaluated your request for a DDMS extension at the following location:

WACS ID: 97869  
 Shelter Pit  
 Shelter Road, Tallahassee  
 Lat 30:23:20 / Long 84:16:49  
 Waste Planned for Management: Yard Trash

The use of this DDMS is approved subject to the following conditions, in addition to the requirements of the Order and Florida Statute 403.7071:

1. Standing water must not be allowed to accumulate in or within 50 feet of areas used to store or process disaster debris;
2. Access to the DDMS must be controlled to prevent unauthorized dumping and scavenging;
3. A DDMS must have spotters to correctly identify and segregate waste types for appropriate management;
4. The DDMS is limited to managing the type(s) of debris listed above; any putrescible waste received at the DDMS must be removed from the site within 48 hours; all other types of prohibited waste should be managed in accordance with the guidance document (see link below);
5. This approval supersedes the authorization issued by the Department for this DDMS on 10/8/2018;
6. Unless otherwise approved by the Department in response to a written request from you, the DDMS must cease operation and all disaster debris must be removed from the site by 5/31/2019; the Department must be notified in writing when the site is closed and stops accepting debris.

The Department has also prepared a guidance document on the establishment, operation and closure of a DDMS for disaster debris. This guidance includes recommended practices, which you are expected to follow as much as practicable, as well as additional requirements from the Order. A copy of this guidance document is available on the DEP website at <https://floridadep.gov/waste/permitting-compliance-assistance/documents/guidance-establishment-operation-and-closure>. This guidance is not a substitute for federal requirements and guidance, including those from the Federal Emergency Management Agency (FEMA).

If you have any questions or comments on this extension letter, or if you require additional time to operate your DDMS, please feel free to contact Dawn Templin by E-mail at [dawn.templin@dep.state.fl.us](mailto:dawn.templin@dep.state.fl.us) or by phone at (850) 595-0644. In order to provide better service to you, the Department is using electronic documents as much as possible. Please provide your E-mail address when replying.

Sincerely,

*Elizabeth Orr*

5/6/2019

Elizabeth Orr  
 Northwest District

Date

EMO / dt

Cc: russell.sullivan@dep.state.fl.us , chad.fetrow@dep.state.fl.us , frederick.dickinson@em.myflorida.com , jason.aldrige@dos.myflorida.com , dawn.templin@dep.state.fl.us , timothy.parsons@dos.myflorida.com

This letter generated by sullivan\_r.

[Click To Send]

[Click To Cancel Letter]





## What is an Extension?

- The department can authorize new DDMSs up until the Order expires, but not after.
- The Order for Hurricane Michael was extended five times.
- Extensions may be issued last minute.



# What is an Extension?

Any questions on what an extension is?





## Is an Extension Needed?

- Is there more debris to manage?
- Is it disaster related?
- Is the site clear of disaster debris?



# Is an Extension Needed?

## Any questions on if you need an extension?





## Requesting an Extension

- Call your DEP District Office to identify your local point of contact
- Northwest District contact is currently [Russell.Sullivan@FloridaDEP.gov](mailto:Russell.Sullivan@FloridaDEP.gov)
- Send an email request to point of contact
- In the email, include the site name and the WACS ID #
- Please consider actual needs before requesting blanket extensions



# Requesting an Extension

Any questions on requesting an extension?





## Closing the Site

- To close the site, make sure all debris is removed or permits/approvals obtained for any ongoing activities at the site.



## **Closing the Site**

### **Three questions that must be answered:**

- Has all debris been removed from the site?
- Was only clean wood and/or vegetative material used to produce mulch beneficially used or left on site?
- Is there any observed evidence of spills or leaks requiring the site to perform environmental sampling in accordance with the DDMS Guidance?





**Russell Sullivan**

**850-595-0575**

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# Debris

Holly Pelt FEMA EHP Advisor





# Our requirements



- ▶ Projects be in compliance with all Federal, State, and local requirements
  - ▶ FDEM permitting
  - ▶ Forest Service approval (burning)
  - ▶ State Historic Preservation Act (Temporary Sites)
  - ▶ USFWS
  - ▶ USACE (wetlands)
  - ▶ Other laws
    - ▶ Coastal Barrier Resource Act
    - ▶ Environmental Justice
    - ▶ Floodplains



# What you can provide

- Temporary and Final disposal locations (GPS preferred)
- WACS and/or Permit numbers
- Methods of disposal
- Dates of operation
- Types of debris
- Any coordination you may have had with agencies (USACE, FWS, etc)





# Special Concerns

- Asbestos and lead based paints
- Burning
  - Burn Bans/Approvals
  - Ash disposal
- Historic Preservation
  - Archeology
  - Historic Buildings
- Threatened and Endangered Species
- Wetlands
- White Goods



# Funding Questions?

Buck Dickinson, FCCM  
Recovery Bureau – Community Assistance  
Consultant

Florida Division of Emergency  
Management

[Frederick.dickinson@em.myflorida.com](mailto:Frederick.dickinson@em.myflorida.com)

(850) 815-4447





# Questions?