

# DISASTER DEBRIS MANAGEMENT PLAN



State of CT DEP

Bureau of Materials Management &  
Compliance Assurance

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# Presentation Outline

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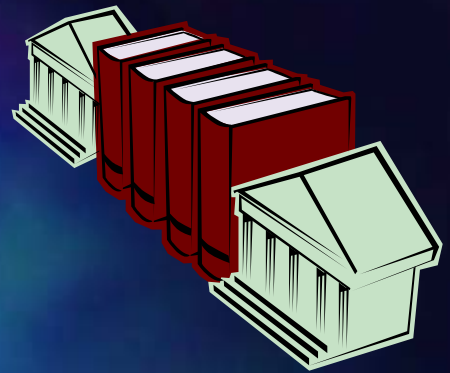
- Statutory authority for plan preparation
- Plan purpose
- State / DEP role in catastrophic debris management
- Strategy for management, disposal, and recycling
- Contracts

# Introduction



- CT overdue for a major hurricane.
- Local, state, and fed. responders face numerous cleanup challenges from natural disasters such as hurricanes.
- Lessons from Florida and New Orleans help us plan for more effective recovery strategies.

# Statutory Authority



- State Authority: Title 28 Chapter 517 of the CGS
- Department Authority:
  - CGS 22a-1c, actions which may significantly affect the environment.
  - CGS 22a-6k, emergency authorization for regulated activity.

# Plan Purpose & Objectives



- Establishes a framework for proper management of debris generated by a natural disaster.
  - Goal: to facilitate prompt and efficient recovery that is cost-effective, eligible for FEMA \$'s and, at the same time protective of human health and the environment.

# Plan Purpose & Objectives



- Objective: Implement emergency waste management practices consistent with the State Solid Waste Management Plan and meets EPA and FEMA criteria for federal aid reimbursements.
- Objective: Have a plan that serves as a resource for municipalities and dovetails with the DEMHS 2006 Natural Disaster Plan.

# DEP's Role



- Responsible for:
  - 1) advising state & local officials on proper disposal of debris.
  - 2) removing debris from all DEP-owned lands and state waterways.
  - 3) Making determinations regarding open-burning waivers (22a-174(f)) to allow for expeditious disposal of vegetative debris.

# DEP's Role

4) Identifying sites for temporary debris staging.

5) Supporting debris management operations of the other state agencies and municipalities (with coordination through DEMHS).





# The Debris Management Plan

- Based on recycling and material separation to the *extent possible*, at the point of generation and at staging/processing locations.
- Goal is to maximize potential processing and recycling options.



# Waste Material Types



# Waste Material Types



# Typical Debris Breakdown

- 30% clean, woody debris (vegetative)
- 70% mixed C&D



# Forecasting Debris

## Forecasting

- Forecasting is a pre-disaster technique to predict debris quant.
- USACE formula (30%+/- accuracy)
- $Q=c(H)(V)(B)(S)$

Q= vol. Debris in CY

C = storm category factor (1-5)

H= # households (town pop. divided by 3)

V = veg. Charact. (1.1-light, 1.3-med., 1.5-hvy)

B=commercial den.(1.0-light,1.2-med., 1.3-hvy)

S=storm precip charact.(1.0-none to light,1.3-med. to heavy)



# Constraints to Debris Management Planning

- In all likelihood, no open burning.
- C&D to be stockpiled and prepared for out of state disposal.
- Identification of temporary debris staging site locations is difficult.



# Temporary Debris Staging Areas



- Have to be approved by DEP
- Establish base line data on existing conditions prior to use.
- Closed out with documentation and sampling.
- Sites have to be returned to pre-use environmental conditions.

# Contracts



- Phase I - Response
  - Use state and municipal labor and equipment first, then
  - Time-and-Materials contract if necessary
- Phase II – Recovery
  - Unit price contracts





# Contracts

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- Debris removal monitoring
  - needed for justification and documentation for FEMA \$.
- Monitors look for
  - improper loading of trucks
  - picking up ineligible debris
  - posting trucks with inaccurate load capacities

# Summary

- Draft plan in review
- Currently drafting pre-need, pre-event contracts
- Next step is working with municipalities on a regional level through DEMHS & regional planning organizations.

