DISASTER DEBRIS MANAGEMENT
PLAN
State of CT DEP
Bureau of Materials Management & Compliance Assurance

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Presentation
Outline

- 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
Forcasting Debris

- Forcasting 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

- 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.