



# DEVELOPING A PRE- DISASTER DEBRIS PLAN

Session Three



# Introduction

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- In Most disaster response plans, debris removal is only mentioned, but doesn't include guidelines for debris management.
- By working with local Emergency Response Teams to develop pre-disaster debris management plans, the impact on local waste services and facilities can be anticipated and managed.
- This session looks at developing a plan

# Objectives

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- Putting things together
- To provide a basic overview of the planning process
- To provide a summary of the elements that are included in a pre-disaster debris management plan

# Why Pre-Disaster Debris Plans?

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- Clearly define waste management role within Emergency Response Teams
- Include debris management in community disaster recovery plans
- Reduce debris management response time after a disaster event
- Understand local capacity for debris management
- Know where to get additional resources (equipment, support)
- Minimize impact on local landfills
- Maximize recycling options
- Prepare guidelines & procedures for debris management before disaster strikes



# Disaster Debris Plan Goals

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- Effective management of disaster debris
- Reduce environmental impact
- Protect public health and safety
- Minimize economic impact
- Optimize the use of limited resources
- Coordination with internal and external agencies
- Communication with the community
- Restore community to normal as quickly as possible

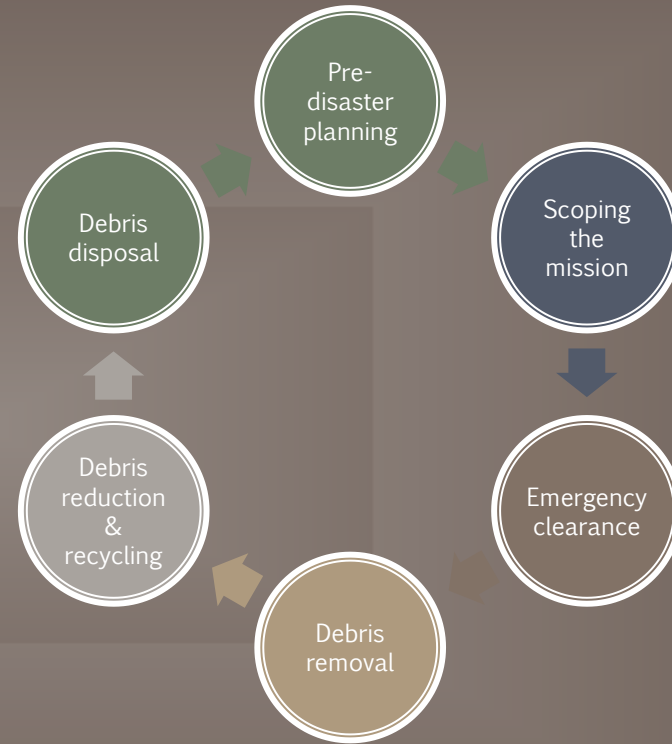


# Creating the Plan

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- Involve the right people
- Ask the hard questions
- Develop partnerships
- Address gaps in the plan
- Train the plan
- Review and Improve



# Who should be involved in debris planning

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- Emergency coordinator
- Waste management staff
- Private waste management companies
- Public works
- Engineering
- Parks department
- Municipal leaders
- Public health officials
- Environment officials
- Safety officers
- Provincial emergency management agencies



# Critical Issues

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- Risk of potential disasters
- Estimated quantities and types of debris
- How & where debris will be:
  - stored
  - collected
  - Reduced
  - disposed
- Who is responsible
- In house resources
- Capabilities of In-house Resources
- Safety
- Procurement of equipment and resources
- Financing





# Elements of a pre-disaster debris plan

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- Incorporate into the community emergency plan
- Establish coordination within the incident command system
- Define responsibilities for management
- Define department roles & responsibilities
- Identify debris management for different scenarios
- Identify mutual aid agreements
- Plan to manage resources
- Develop safety procedures
- Develop Standard Operating Procedures
- Debris records and financial aspects



# Consider

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- Debris types and volumes
- Where and how it is collected
- Capacity of existing facilities
- Traffic impacts
- Existing resources
  - Equipment, manpower, services
- Temporary debris sites
  - Locations, layout
- Pre-disaster contracts
  - Equipment, services
- Debris monitoring & records
- Financial aspects



# Have a Plan For Your Employees

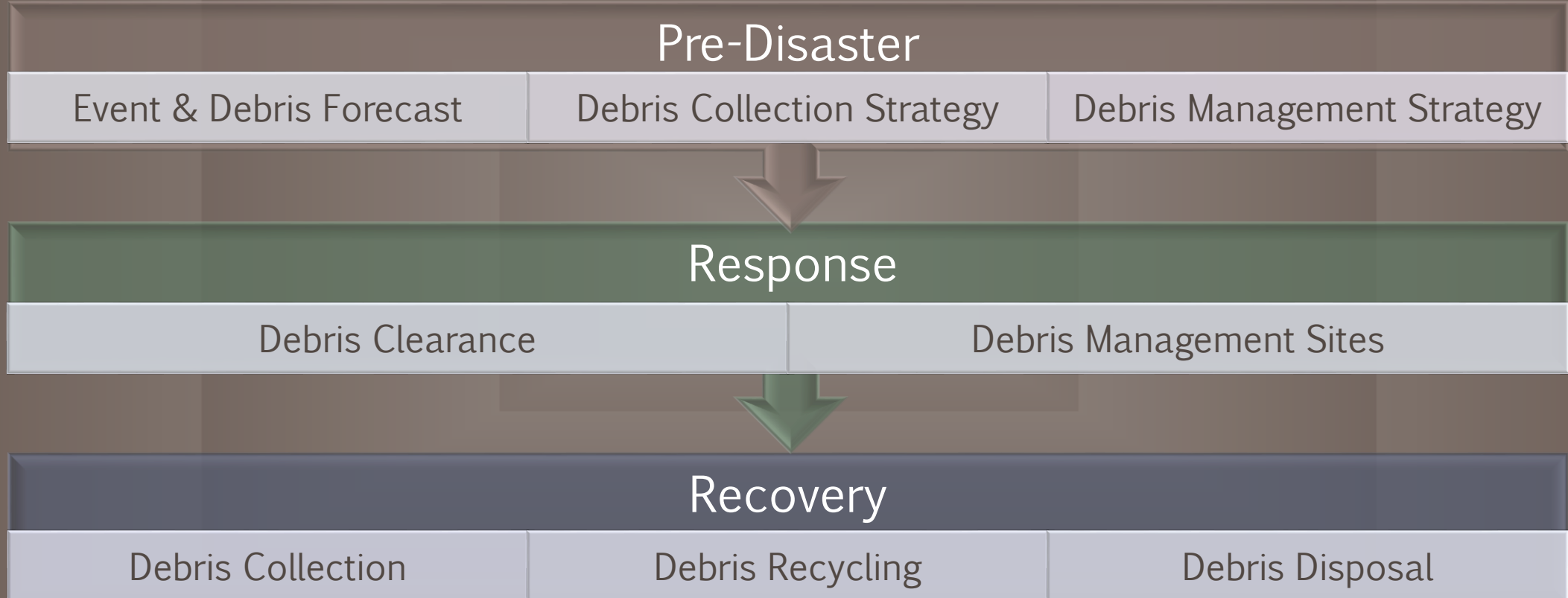
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- How to contact if evacuated
- Some may experience post-disaster stress (PTS)
- Homes may be affected by the disaster
- May need time to deal with displaced families
- Staff will be under pressure with increased stress
- Need to provide employees with time away to refresh
- Should have more than one person trained on the plan



Foothills Regional Landfill Staff  
SWANA Unsung Heroes 2011

# Debris Management Timeline & Activities



# Debris Recycling

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## Metal recovery

- magnet
- Bailer/logger



## Vegetation debris

- grind
- Mulch, compost amendment, landfill cover, energy



## Concrete/asphalt

- crush
- aggregate



## Appliances

- cfc recovery
- crush/bale

# Disposal Issues

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Traffic volume  
Scale capacity  
Site control  
Safety



Airspace  
Equipment  
Manpower



Waste  
characteristics  
Handling  
procedures  
Environment issues

# Group Exercise

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- Use your community example
- Apply debris assessment you described in Session 2
- Put a plan together based on the scenario you were given:
  - what additional manpower and equipment do you think you will need
  - What method of debris removal would you expect to be used, and why?
  - How will you deal with hazardous materials
  - Where will waste go
  - What can be recycled?
  - What will be landfilled?