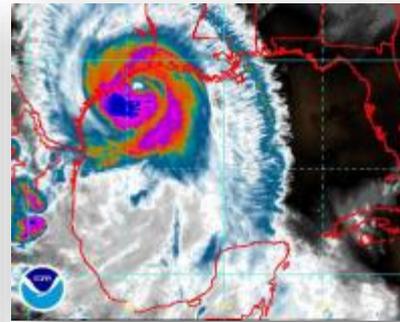


# Disaster Debris Response and Recovery



State of Vermont  
September 6, 2019

# Agenda

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Introduction

Importance of Documentation

Phases of Operations

- Preparedness
- Immediate Response
- Recovery
- Closeout

Best Practices

# Your Presenters

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## **Anne Cabrera, Deputy Director Post Disaster Programs**

Anne has worked for 14 years with clients across the country planning for and recovering from disasters. Involved in every major disaster declaration since 2005, Anne's primary focus has been on reimbursement of costs and planning for long-term recovery. In addition Anne is a highly regarded subject matter expert in planning for disaster debris removal operations and helped develop plans for some of the largest cities and counties in the Country.

## **Karl Dix, Director of Client Services**

15 years experience ensuring maximum client FEMA reimbursement, conducting client training; Quality control during projects; State-wide coordinator for Hurricane Irma in Georgia and Florida; Operations Manager/Planner for USACE California wildfire recovery in Lake, Mendocino and Napa counties; M.S. in Threat and Response Management, University of Chicago



# Why Document?

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Provide oversight to activities in the field

Create an “audit trail” of removal and disposal of debris

Mitigate risk of non-reimbursement by FEMA



# Importance of Documentation

The Appropriations Clause of the Constitution, Art. I, sec. 9, cl. 7, provides that: "No money shall be drawn from the Treasury, but in consequence of appropriations made by Law."

- This means that no money can be paid out of the Treasury unless that payment is authorized by statute.
- ***The onus is on the applicant to know eligible and ineligible work and to understand the grant program funding the project.***
- The Federal government is forbidden by the Constitution from paying for any action that is not authorized by statute regardless of a verbal affirmation from a federal employee.

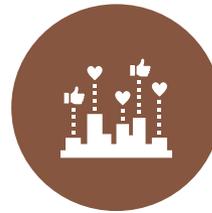
# In other Words...

## Importance of Documenting

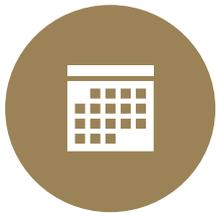
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Necessary if applying for federal grants



Record generated for activity in the field



During large events, records may be in the hundreds of thousands



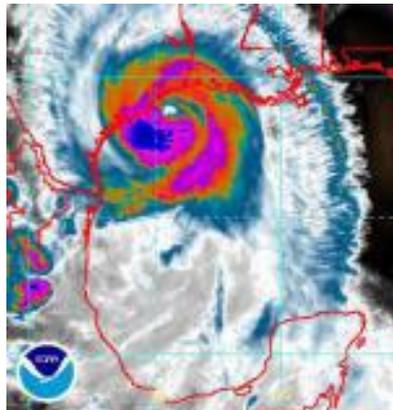
Invoicing, project worksheets and reconciliation tied to records



# Phases of Operation

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Response and Recovery Operations



# Debris Operations Disaster Management Timeline

## Preparedness

- Debris planning
- Contracting
- Training

## Immediate Response

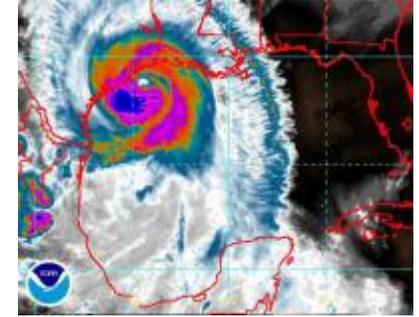
- Damage assessment
- Emergency roadway clearing

## Recovery

- Right –of- way
- Leaner, hanger, stump
- Private property
- Special program

## Closeout

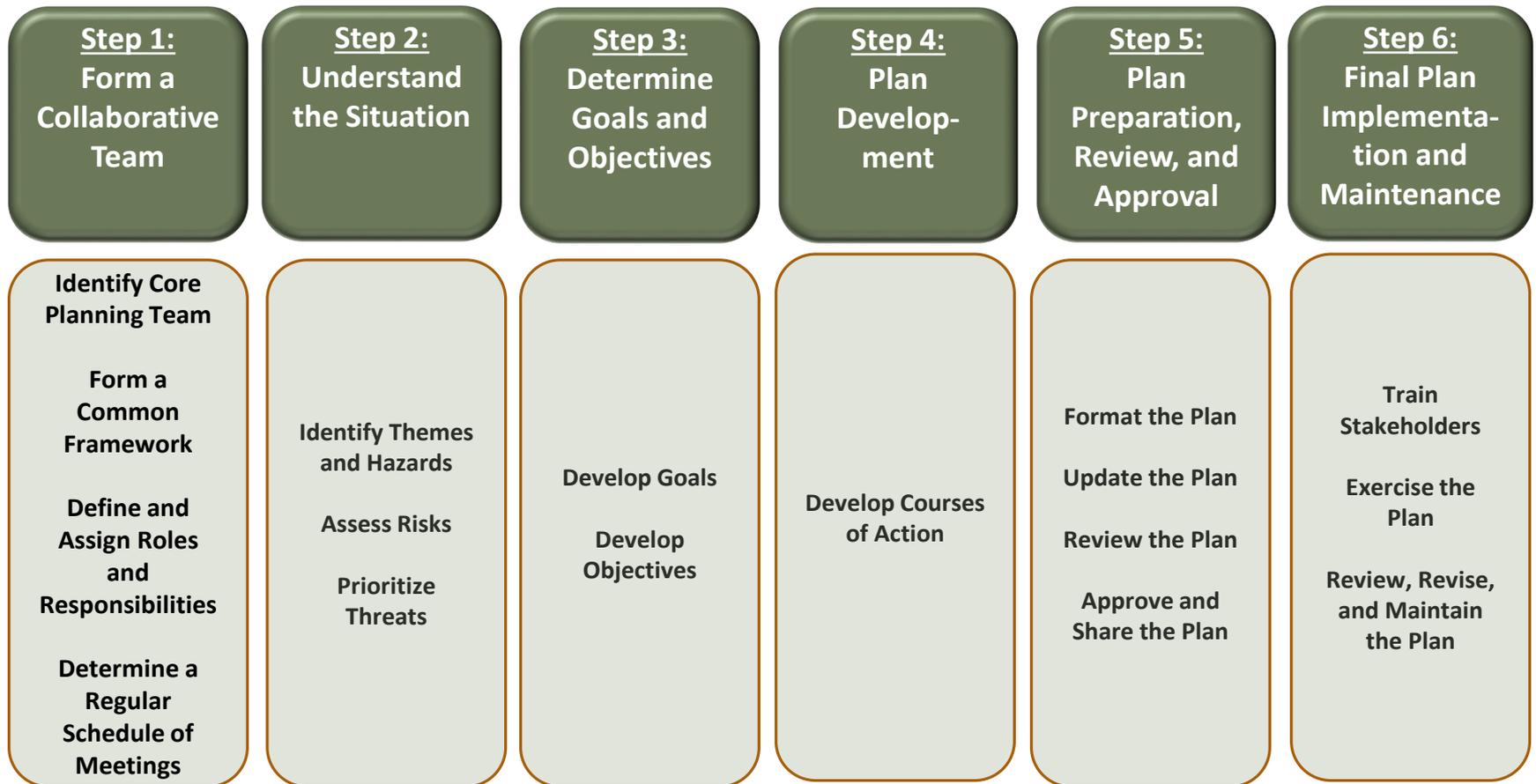
- FEMA reimbursement
- Audit



# Preparedness

RESPONSE AND RECOVERY OPERATIONS

# Planning for Debris



**Step 1:  
Form a  
Collaborative  
Team**

**Identify Core  
Planning Team**

**Form a  
Common  
Framework**

**Define and  
Assign Roles  
and  
Responsibilities**

**Determine a  
Regular  
Schedule of  
Meetings**

# Step 1: Form a Collaborative Team

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- Public Works/Solid Waste
- Local Emergency Planning Committee
- Environmental Protection And Historical Preservation
- Parks
- Procurement/Finance And Administration
- Legal Services
- Code Enforcement
- Voluntary Organizations Active in Disasters (VOAD)
- Disabilities Coordinator

**Step 2:  
Understand  
the Situation**

## Step 2: Understand the Situation

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- Establish plan structure.
- Review local plans.
- Determine likely debris scenarios.
- Estimate potential debris volume.
- Determine capabilities and gaps based on available assets and pre-qualified vendors.
- Identify vulnerable populations.

**Identify Themes  
and Hazards**

**Assess Risks**

**Prioritize  
Threats**

**Step 3:  
Determine  
Goals and  
Objectives**

## Step 3: Determine Goals and Objectives

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- Determine the plan mission.
- Identify operational priorities.
- Determine goals based on operational priorities.
- Use FEMA's Critical Plan Components to identify operational priorities.

**Develop Goals**

**Develop  
Objectives**

**Step 4:  
Plan  
Develop-  
ment**

## Step 4: Plan Development

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- Establish operational timeline.
- Describe the scenario.
- Identify and describe decision points.
- Identify and describe operational tasks.
- Determine course of action.
- Develop the concept of operations.

**Develop Courses  
of Action**

# Step 5: Plan Preparation, Review, and Approval

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## **Step 5: Plan Preparation, Review, and Approval**

- Route for approval:
  - Legal services
  - Human resources
  - Environmental
  - Disabilities coordinator
  - Executive official

**Format the Plan**

**Update the Plan**

**Review the Plan**

**Approve and  
Share the Plan**

# Step 6: Final Plan Implementation and Maintenance

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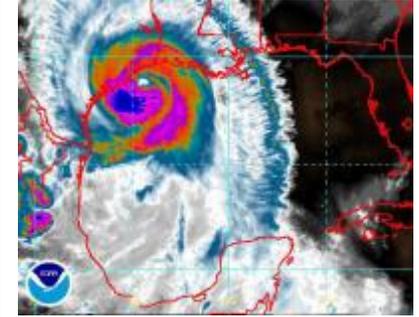
## Step 6: Final Plan Implementa- tion and Maintenance

- Provide training to key personnel on the plan.
- Exercise the plan and make updates.
- Implement when necessary.
- Regularly maintain the plan.

**Train  
Stakeholders**

**Exercise the  
Plan**

**Review, Revise,  
and Maintain  
the Plan**



# Immediate Response

RESPONSE AND RECOVERY OPERATIONS





## Time and Materials Activities Emergency Roadway Clearance

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# Time and Materials Activities Documentation Requirements

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Activities conducted  
immediately after disaster

Complete time and materials  
documentation with  
applicable information

Produce maps detailing areas  
worked

Provide equipment log and  
activity log for each day's  
activity

Assign a detail-oriented  
person to this task!

Time and  
Materials  
Activities  
What will  
Draw Scrutiny

Work that goes weeks following the incident

Not documenting broken down equipment

Incomplete activity logs or maps, locations

If scope of work is better suited for unit rate



# Truck Certification Process

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# Truck Certification Basics

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What is truck certification?

Truck certification monitors measure, calculate, and document the hauling capacity of trucks used for debris clean up.

Their results are then used by collection and disposal monitors to write load tickets.



# Measurements

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Box type trucks need three initial measurements to calculate an overall volume of the truck:

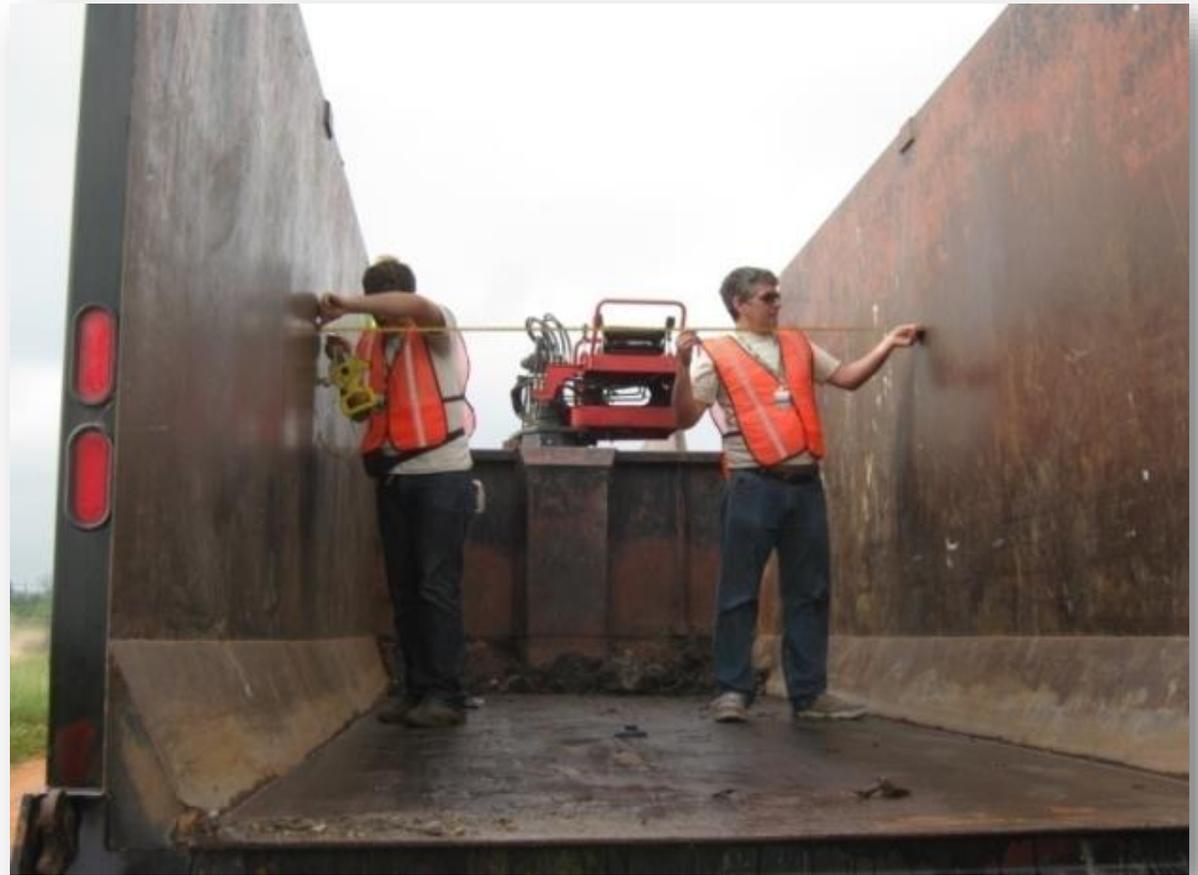
**LENGTH**



# Measurements

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**WIDTH**



# Measurements

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**HEIGHT**



## Measurements

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Deductions are taken when any permanent object in the truck bed reduces the capacity of the debris truck's overall volume.



## Truck Certification Key Points

Most critical component of debris removal operations

Measuring internal capacity of truck

Each truck must receive:

- Truck certification form
- Placard displayed on driver's side
- Photograph of vehicle and driver

Ensure that truck is completely empty

# Truck Certification Documentation

## RecoveryTrac Truck Certification Audit Report

### BOROUGH OF SAYREVILLE - SANDY - ROW COLLECTION - Truck Certification

	<u>Tot Trucks Certified</u>	<u>Tot Certified Capacity</u>
☒ Contractor: ASHBRIIT	19	1142
<b>Totals:</b>	<b>19</b>	<b>1142</b>



### BOROUGH OF SAYREVILLE - SANDY - ROW COLLECTION - Project Truck Certification Details

Contractor: ASHBRIIT

Sub-Contractor 1: D&J

<u>Sub-Contractor 2</u>	<u>Truck No.</u>	<u>Capacity</u>	<u>Cert Date</u>	<u>Status</u>	<u>Vehicle Tag</u>	<u>Vehicle Type</u>	<u>Vehicle Features</u>
☒ N/A	045579	62	12/03/2012 2:18 PM	ACTIVE	PI 9649 (GA)	SELF-LOADING TRUCK	

Primary Box (L x W x H): 203x100x108 = 2192400 Cu Inches ( + )

Type: Other (L x W x H): 60x100x78 = 468000 Cu Inches ( + )

Type: Other (L x W x H): 62x100x38 = 235600 Cu Inches ( + )

Total Volume: 2896000 Cu Inches (/46,656) = 62.07 CuYds

Driver-Placard View



Side View

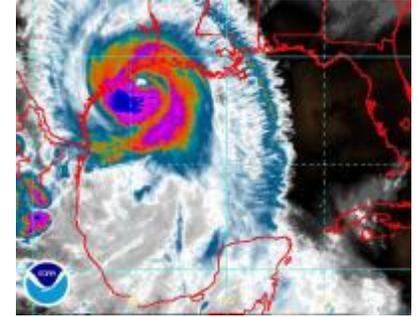


Back-Interior View



Front View





# Recovery

RESPONSE AND RECOVERY OPERATIONS

# ROW Collection

Debris that is a result of a disaster incident can be placed along the ROW or curbside for collection.

- Vegetative debris: Tree limbs, branches, and other leafy material
- Construction and demolition (C&D) debris: Damaged components of buildings (excluding reconstruction debris)
- Household hazardous waste (HHW): Paints, stains, solvents, etc.
- White goods: Refrigerators, air conditioners, etc.

# Public Information/ Emergency Set-out Procedures

Debris should be staged separately by debris type along the ROW.

Do not bag debris; only loose debris will be collected.

Do not mix HHW with any of the other staged debris types.

Do not mix household garbage with any of the other staged debris types.

Do not place debris near water vaults, fire hydrants, or any other above-ground utility.

Do not place debris on driveways.

# Separating Your Debris

Debris should be placed curbside, without blocking the roadway or storm drains.

## DEBRIS SEPARATION

Separate debris into the six categories shown below.

## DO NOT STACK OR LEAN

Placing debris near or on trees, poles, or other structures makes removal difficult. This includes fire hydrants and meters.

## UNSURE WHERE TO PLACE DEBRIS?

If you don't have a sidewalk, ditch or utility line in front of your house, place debris at the edge of your property before the curb.

## NO PICKUP ZONE

Any debris placed from the sidewalk toward your property will not be picked up.

**No Pickup**

**No Pickup**



**Normal Household Trash**  
Normal household trash and bagged debris of any kind will not be picked up with debris as part of this program. You should continue to follow your normal rubbish removal schedule.

## VEGETATION DEBRIS

- Leaves (do not put in bags)
- Logs
- Plants
- Tree branches

## CONSTRUCTION & DEMOLITION DEBRIS

- Building materials
- Carpet
- Drywall
- Furniture
- Lumber
- Mattresses
- Plumbing

## APPLIANCES & WHITE GOODS

- Air conditioners
- Dishwashers
- Freezers
- Refrigerators
- Stoves
- Washers, dryers
- Water heaters

## ELECTRONICS

- Computers
- Radios
- Stereos
- Televisions
- Other devices with a cord

## HOUSEHOLD HAZARDOUS WASTE

- Cleaning supplies
- Batteries
- Lawn chemicals
- Oils
- Oil-based paints and stains
- Pesticides

For more information contact your local government.

# Final Disposal

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- It is critical that plans and contingencies for final disposal of vegetative and mixed debris are established.
- Final disposal sites must be properly permitted.
- Debris must be properly disposed/applied at final disposal site.
- Audits are inevitable.





# Specialized Debris Removal Operations

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# Special Debris Removal Common Activities

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Hanging limb and leaning tree removal (leaners and hangers)



Private property debris removal (PPDR)



Public parks



Stump removal



Vessel and vehicle recovery



Animal carcass collection



White goods



Hazardous waste

# Leaners, Hangers, Stumps (LHS) Requirements

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## **Hazardous Tree Removal (Leaners)**

it has a diameter breast height of six inches or greater; **and one or more of the following criteria are met:**

- Has more than 50 percent of the crown damaged or destroyed
- Has a split trunk or broken branches that expose the heartwood
- Has fallen or been uprooted within a public-use area; and/or
- Is leaning at an angle greater than 30 degrees.

## **Hazardous Limbs (Hangers) must be:**

- Located on improved public property
- Greater than two inches in diameter at the point of breakage and
- Still hanging in a tree and threatening a public-use area, e.g. trails, sidewalks, golf cart paths

Photos	Ticket No.	Monitor	Date	GPS-Lat	GPS-Lng	Address	Service Code	Unit Count	Measure	Zone	Photo Count
	122180619	CORY CHRISTENSEN (B213443)	06/15/2013 1:12 PM	43.527799	-96.719743	1915 S 5TH AVE	1A	2	2	4(GIS: 4-1)	4

Crew Photo



Pre-Work Photo



Measurement Photo



Post-Work Photo

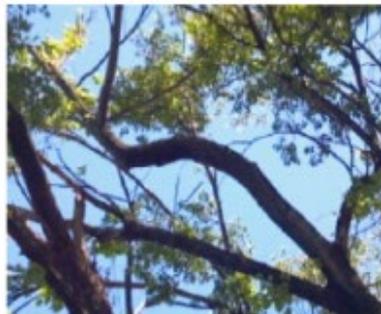


	122180620	CORY CHRISTENSEN (B213443)	06/15/2013 1:21 PM	43.527898	-96.719586	1915 S 5TH AVE	1A	6	3.5	4(GIS: 4-1)	4
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Crew Photo



Pre-Work Photo



Measurement Photo



Post-Work Photo



# Data Management / Invoice Reconciliation

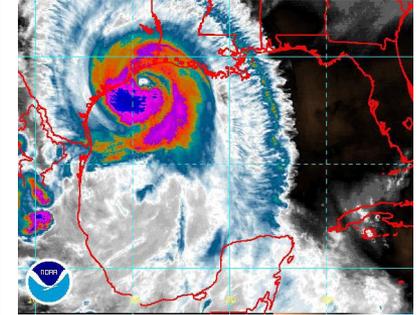
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## Data Management

- Field data reviewed on daily basis for accuracy/fraud/etc.
- Client provided with real time data via RecoveryTrac Geoportal
- Daily or weekly progress reports also provided

## Invoice Reconciliation/Payment Recommendations

- Invoicing kickoff meeting held with finance/accounting staff ADMS data reconciled with debris hauler
- ADMS data reconciled with debris hauler
- Hauler provides invoice with back-up support
- Tetra Tech issues payment recommendation to Client



# Closeout

RESPONSE AND RECOVERY OPERATIONS

# Closeout

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Critical that ALL documentation is maintained until certainty that all audits are complete (may be 10+ years)



May be multiple rounds of audits



Assign the RIGHT staff to this task...detail oriented



Save emails, meeting notes, etc.

# Common Mistakes and Reasons for Non-Reimbursement

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Contracts not competitively bid

Contract pricing not reasonable (line items)

Time and materials work performed after first 70 hours

Double hauling with no reduction of volume

Insufficient documentation (loading address, photos, GPS, etc.)

Unable to substantiate work in post-work field validation

Stump extraction without FEMA approval

Work performed outside area of legal responsibility (private roads, FHWA roads, etc.)

Work the responsibility of another federal agency (NRCS, FHWA, etc.)

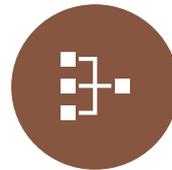
Final disposal in non-permitted site

# Best Practices Debris Operations

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Be careful with your contracts...do it right



Be active/involved in operations



Educate yourself/be informed



Don't undervalue the importance of assigning quality staff to debris mission



Don't rush and make critical mistakes



Communication is critical – daily meetings with contractors, state, FEMA

# Best Practices Debris Operations

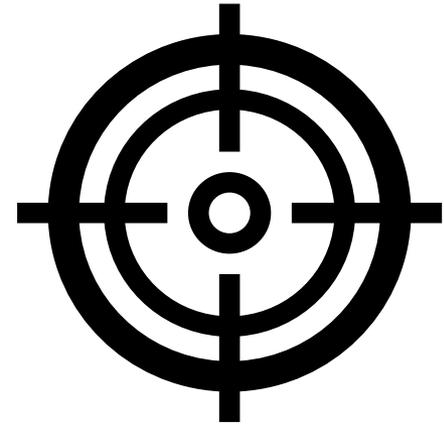
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Empower your debris management team

Put the “A” team on ensuring a strong audit trail results from field operations

Manage expectations (every disaster is unique and may not be cleaned up in 30 days)

Prepare for the long haul – 10+ years potentially to close out



# Questions

