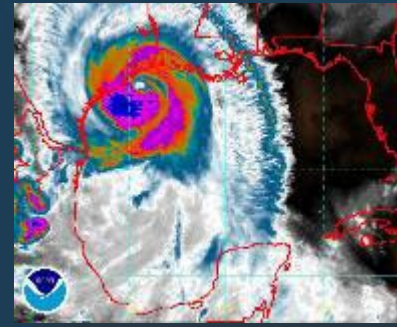


H-GAC 2023 Webinar/Workshop Series



Disaster Debris Workshop

WORKSHOP DATE:

JUNE 8, 2023

TIME:

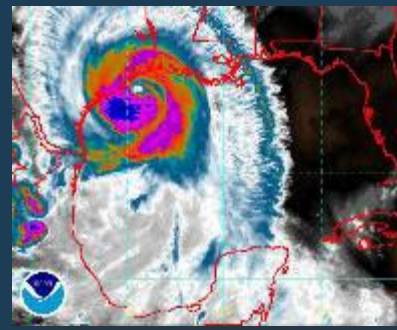
1:30 P.M. TO 4:30 P.M.



Agenda



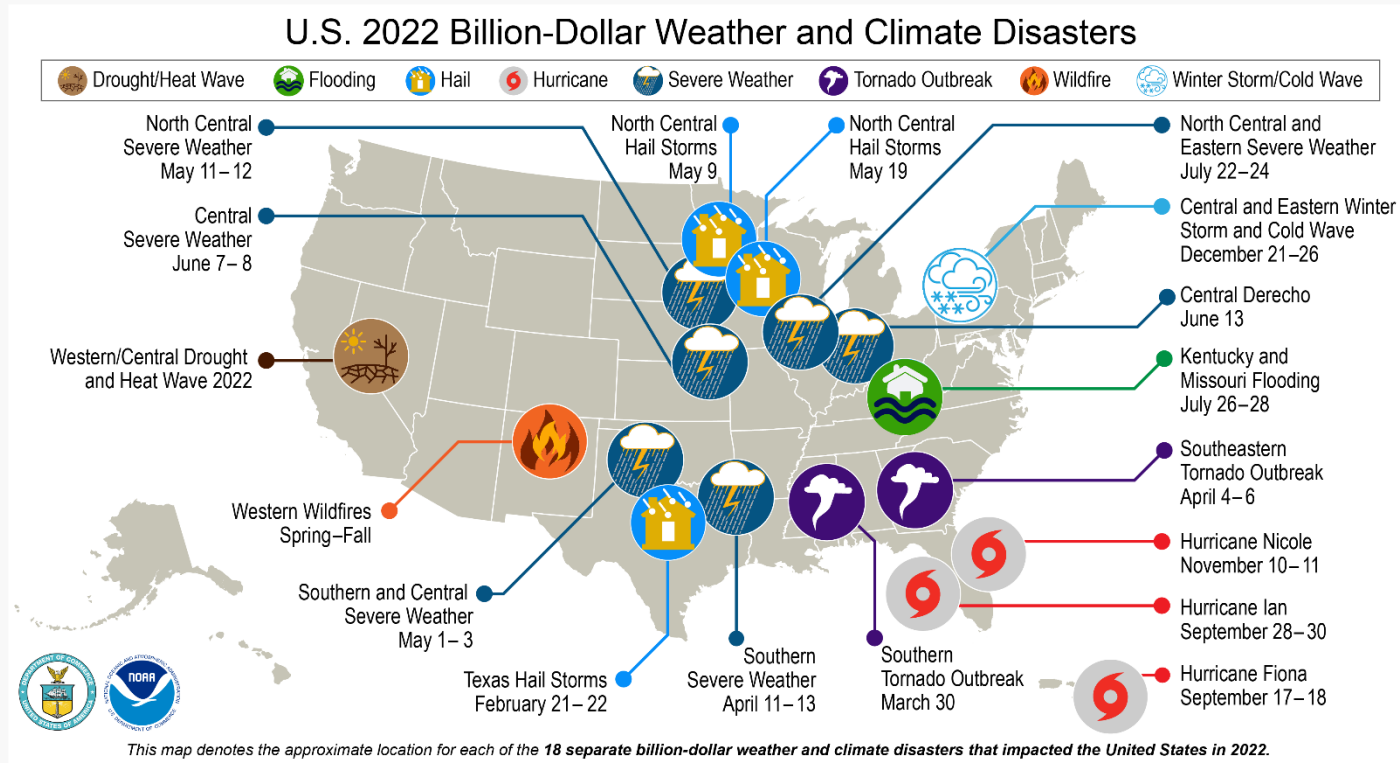
1. Introduction: A Look Back Over the Past Year
2. Disaster Debris Management 101
3. Debris Management Sites
4. Public Information
5. Managing Finances While Mitigating Risk



Part 1: A Look Back Over the Past Year



2022 Billion Dollar Weather Events



From 1980 to present, the overall damage/cost of climate disasters exceeds \$2.4 trillion (341 events)

Incidents Occurring Over the Past Year

- Hurricane Ian
- Central Texas Ice Storm
- Mississippi Valley Tornado Outbreak

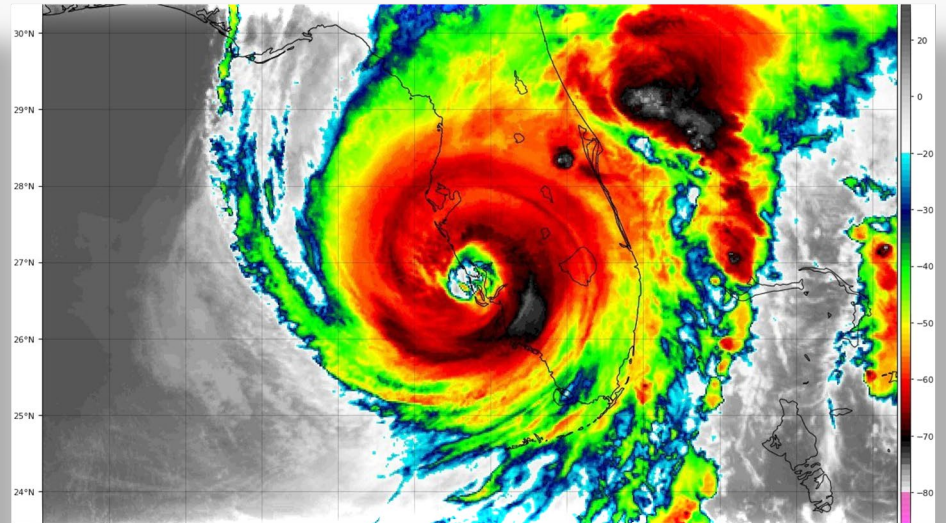


Hurricane Ian - Case Study

Event Recap (DR-4673):

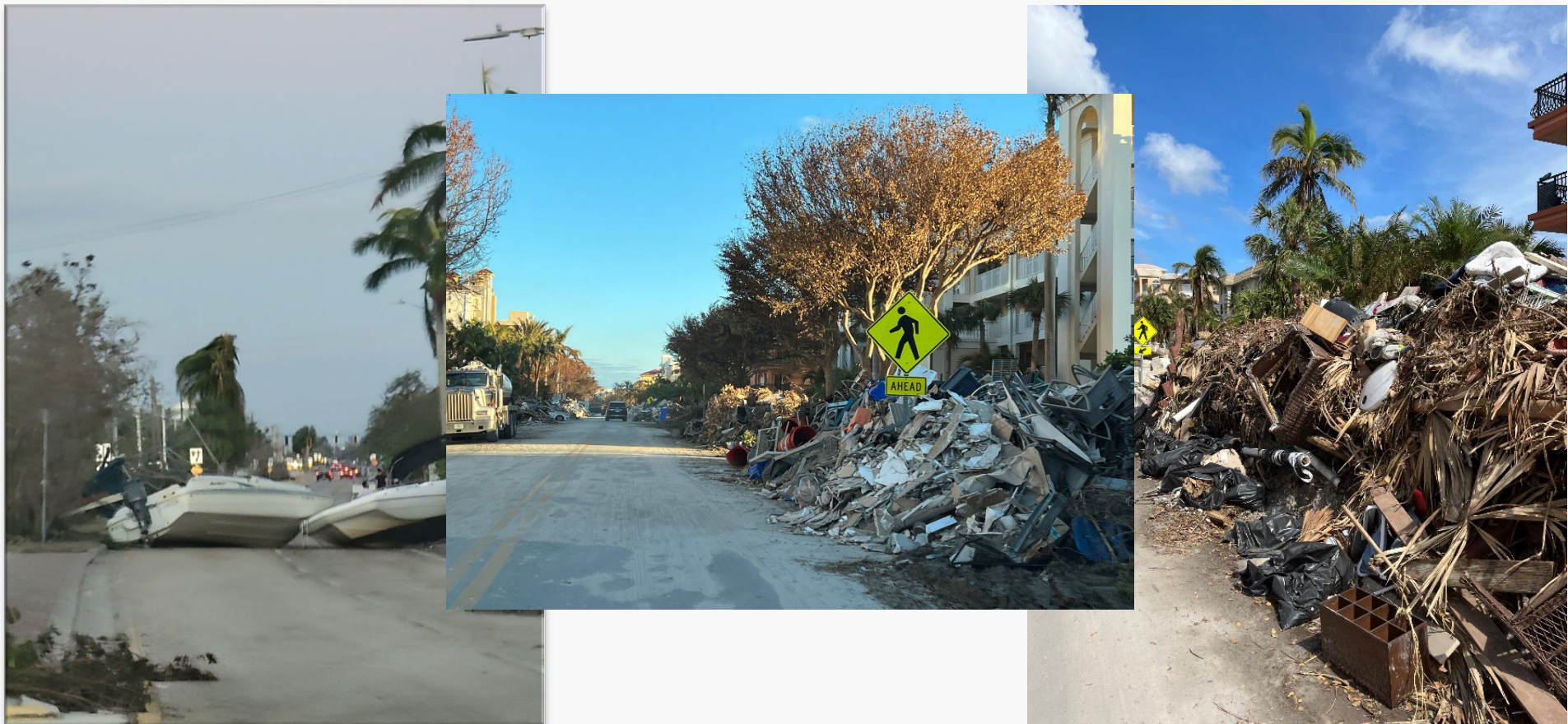
Hurricane Ian was a devastating Category 4 hurricane that made landfall in Southwest Florida on September 28, 2022. A destructive storm surge was pushed inland in coastal areas like Fort Myers & Punta Gorda, while high winds and extreme rainfall caused catastrophic damage and flooding across Florida's interior. It is estimated that Hurricane Ian caused more than \$50 - \$90 billion in damages in Florida.

FEMA PA funding to support recovery



Hurricane Ian - Impacts

- Category 4 hurricane with sustained winds of 150 mph.



Hurricane Ian - Impacts



110 Pier E
Naples FL 34112
United States
Oct 18, 2022 at 2:51:43 PM

Hurricane Ian Challenges

- Resource logistics
- Communication/Technology
- Changing workforce
- Misinformation
 - PPDR Guidance
 - Commercial Debris
 - FEMA alternative procedures
 - Social Media



Hurricane Ian

- Given the widespread debris impacts, questions arose during the response regarding debris removal from commercial and private gated communities.



Central Texas Ice Storm

- Major vegetative debris generating incident.
- The incident period was January 30, 2023, to February 2, 2023.
- It was not declared a disaster until April 21, 2023.



National Weather Service Image

Central Texas Ice Storm

- Storm impacts - 1/30 to 2/1
 - 0.75 inches of Ice in central Texas
- City of Austin mobilized internal and external contractor support immediately.
- Austin collected 1.3 Million Cubic Yards of vegetative Debris



Impacts-Widespread Debris



Debris Operations



- Contracted debris collection began on Feb 6.
- 3 Debris Management Sites and 1 Final Disposal site
- Collections quickly exceeded initial debris estimates.
- Contracted collection reached 1M cubic yards in 30 days! 3/6.
- This coincided with about the timing of first pass completion.

Debris Management Sites

- 3 Contractor DMS sites
- Vegetative Debris only
- Debris Reduction by Grinding
- 1 Final Disposal to Hornsby Bend facility.



Special Considerations - Leaner/Hanger

- Oak wilt is a significant tree disease in Central Tx.
- Jurisdictions involved in clean up had to make special provisions in their debris contracts to prevent the spread of Oak Wilt.
- Contractors were required to clean equipment and spray paint tree cuts for leaner/hanger work.



Mississippi Valley Tornado Outbreak

- On March 24, 2023, an outbreak of tornadoes occurred starting in Texas and moved eastward.
- On An EF4 tornado with 190 mph winds struck Rolling Fork, Mississippi killing 17 people and injuring 165.



EF4 Tornado Damage to a Duplex (NWS Picture)

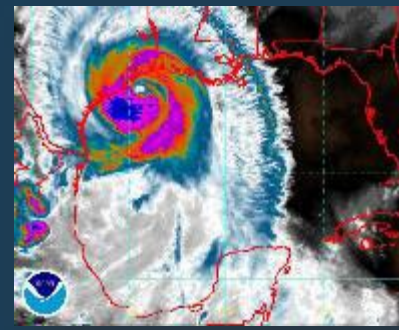
Things to Consider

- We haven't had a large vegetative debris generating incident in this region since Hurricane Ike in 2008.
- In 2008:
 - George W. Bush was president
 - Lady Gaga released her debut album
 - One dozen eggs cost \$1.99
 - Katy Perry had her first hit with “I Kissed a Girl.”



Things to Consider

- It has been almost 6 years since Hurricane Harvey. Since then, many jurisdictions have experienced:
 - Staff turnover with new employees with no disaster debris related experience.
 - New elected officials.
 - Expiring debris hauling and monitoring contracts.
 - Disaster Debris Management Plans that need to be updated with current regulations and best practices.
 - Land set aside for debris management sites may no longer be available.



Part 2: Disaster Debris Management 101



Disaster Debris Preparedness

- Actions that can be taken to enhance a jurisdiction's capacity to prepare for and recover from a debris generating disaster.



Disaster Debris Preparedness Tasks

- Prepare prepositioned contracts
- Develop or update your disaster debris management plan DDMP
- Identify debris management sites
- Identify resources for recycling, reuse, and disposal
- Create or update priority road lists
- Review State and FEMA guidance and regulations

Preparing or Updating a Disaster Debris Management Plan

Elements of an All-Hazards Disaster Debris Management Plan (DDMP) 1 of 2

- Purpose and objectives
- Types and anticipated quantities of debris.
- Debris collection strategy
- Debris disposal locations/debris management sites
- Debris removal on private property
- Use and procurement of contracted services



Elements of an All-Hazards Disaster Debris Management Plan (DDMP) 2 of 2

- Use of force account (jurisdiction) labor
- Monitoring of debris operations
- Health and safety
- Environmental considerations/regulatory requirements
- Public information strategy



Understand How Bad is Bad

- Determine estimates of the quantities and types of debris for the hazards for which your jurisdiction is vulnerable.



Understand How Bad is Bad

- Use your jurisdiction's Hazard Mitigation Plan to get an idea of the types of hazards for which the jurisdiction might be exposed.
- The Debris Estimating Field Guide or Hazus can be used to determine estimates of some hazards.



Debris Estimating Field Guide

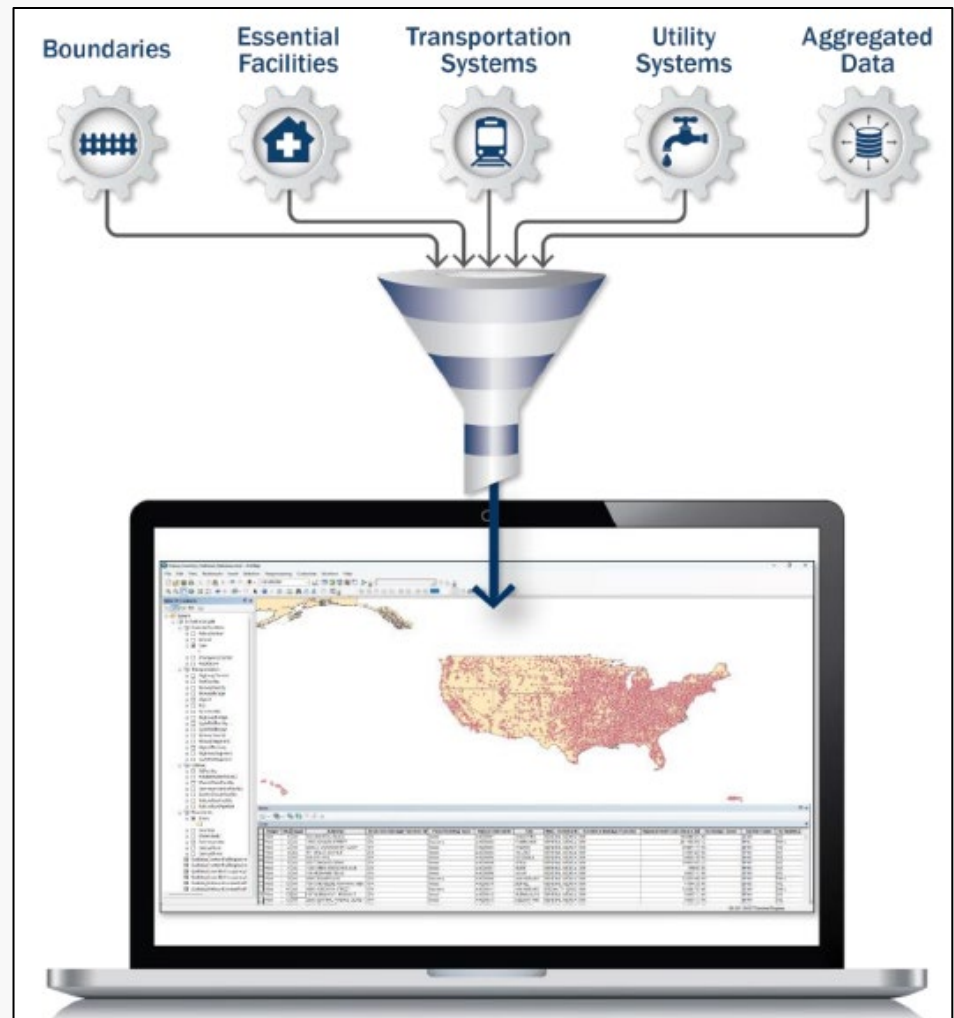
FEMA 329 / September 2010



FEMA

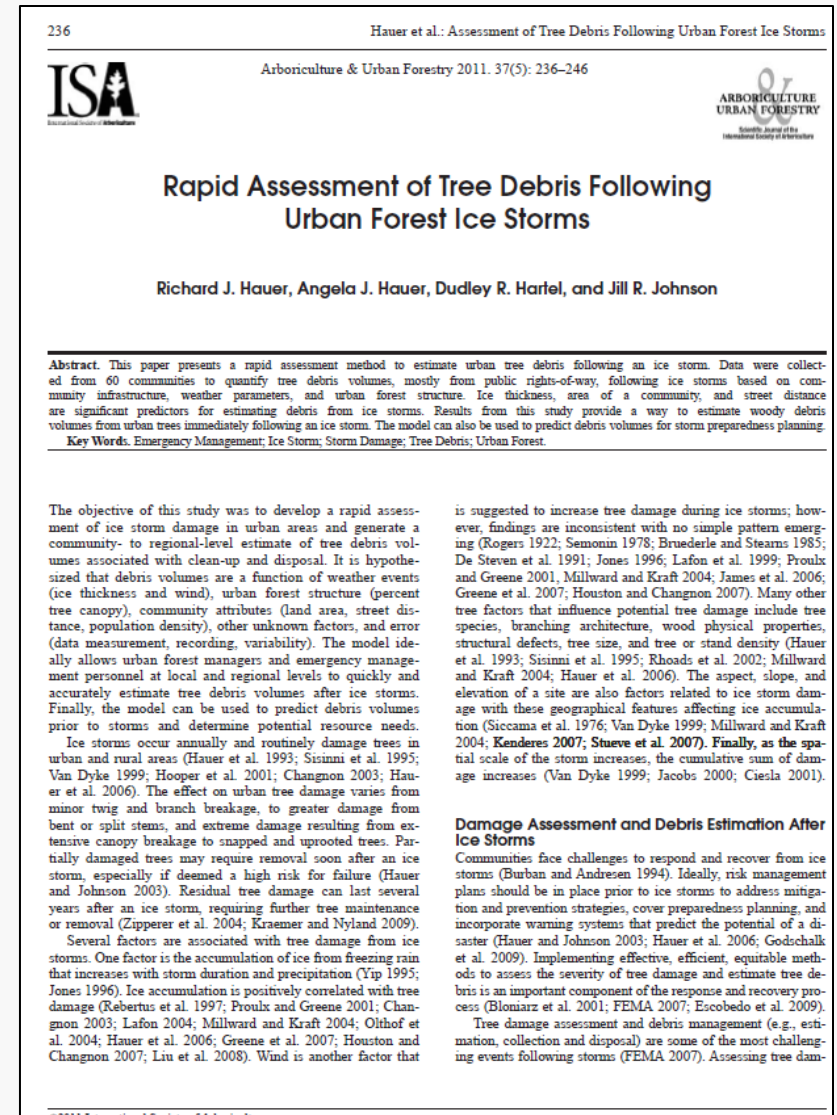
Understand How Bad is Bad

- Hazus can be used to estimate risk and debris quantities from:
 - Hurricanes
 - Floods
 - Tsunamis
 - Earthquakes



Tree Debris From Ice Storms

- This paper presents a rapid assessment method to estimate urban tree debris following an ice storm.
- The paper can be found at <https://www.fs.usda.gov/research/treesearch/39158>.



Identify Agencies/Departments With a Role In Disaster Debris Management

- Public Works - Equipment to move and collect debris, knowledge of jurisdiction owned roadways.
- Solid Waste - Equipment to move debris and knowledge of disposal options.
- Parks - Equipment to move and collect debris, responsibility for jurisdiction owned park debris removal.

Identify Agencies/Departments With a Role In Disaster Debris Management

- Emergency Management - Manage resources, incident command, and communications.
- GIS - Assist in mapping jurisdiction boundaries, areas of hazards, progress of debris operations.
- Communications/Public Affairs - Provide instructions to the public regarding debris operations and status updates.
- Finance - Track costs of debris operations for reimbursement.

Identify Agencies/Departments With a Role In Disaster Debris Management

- Building Inspections - Conduct inspections of buildings and residences for safety and ensure they meet building codes.
- Public Health - Letter needed from public health authority verifying the threat the debris poses to public health. Environmental considerations.
- Purchasing - Acquire needed supplies and services in keeping with federal purchasing guidelines.

Disaster Debris Management Planning

- Identify other stakeholders with a role in disaster debris management.
 - Debris Haulers - Contractor for clearing, collection, and disposal of debris.
 - Debris Monitor - Contractor for documenting the collection and disposal of debris including the location, type, quantity and reduction. Also certifies trucks and verifies debris hauler invoices prior to payment by the jurisdiction.

Disaster Debris Management Planning

- Identify other stakeholders with a role in disaster debris management.
 - Trash hauler - Regular trash collection must be continued as the debris hauler will not pick up trash.
 - Volunteer agencies - Coordinate with volunteer agencies to assist residents in bringing debris to the right of way, mucking out houses, etc.
 - Volunteer agencies hours can be used to help meet the jurisdiction's match for public assistance.

Identify Road Clearance Priorities

- Critical roads with access to:
 - Fire stations
 - Police stations
 - Hospitals
 - Nursing facilities
 - Pump stations
 - Utilities



Plan Activation

Immediate Response Actions

- Begin emergency roadway debris clearance.



Public Assistance State of Texas Assessment Tool

- The Public Assistance State of Texas Assessment Tool (pSTAT) is a survey tool which allows a local jurisdiction to capture photos, locations, and estimates of damage facilities, debris, and other disaster related damages.
- Once damage submissions in the pSTAT meet or exceed the county's fiscal threshold, TDEM will contact FEMA for a meeting to discuss any necessary documentation to certify the damage claims.

Truck Certification



DISASTER DEBRIS HAULER					
Truck #:					
8	1	3	3	7	3
Eight One Three Three Seven Three					
Capacity:					
0	7	8	CYD		
Zero		Seven	Eight		
Prime Contractor:			Disaster:		
Crowder Gulf			DR 4399		
Sub-Contractor:			Applicant:		
Gulf Services			Bay County PDR		



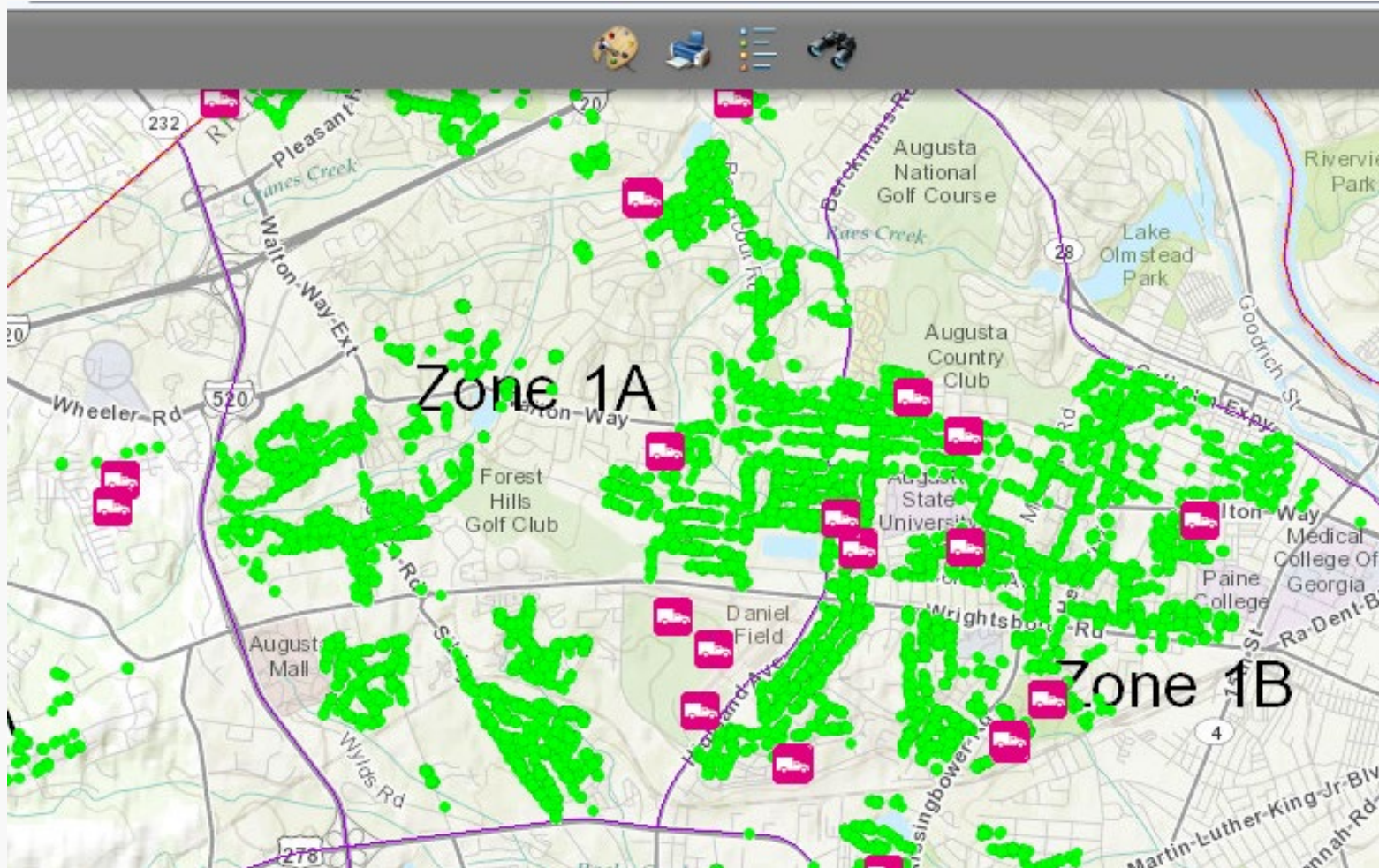
Recovery Activities: 2 Days-2 Weeks

- Open DMS locations.
- Prioritize roads/areas for debris collection.
- Issue press release regarding segregation of debris.
- Begin ROW debris removal.
- Perform parks damage assessment.
- Begin program of environmental monitoring of DMS locations.
- Coordinate with external agencies.
- Initiate discussions with FEMA.
- Obtain FEMA guidance for gated community and private property debris removal.

ROW Collection and Monitoring



Automated Debris Management Systems (ADMS) for Real Time Collection Monitoring



White Goods Collection and Coolant Removal



Electronic Waste Removal



Hazardous Household Waste Removal



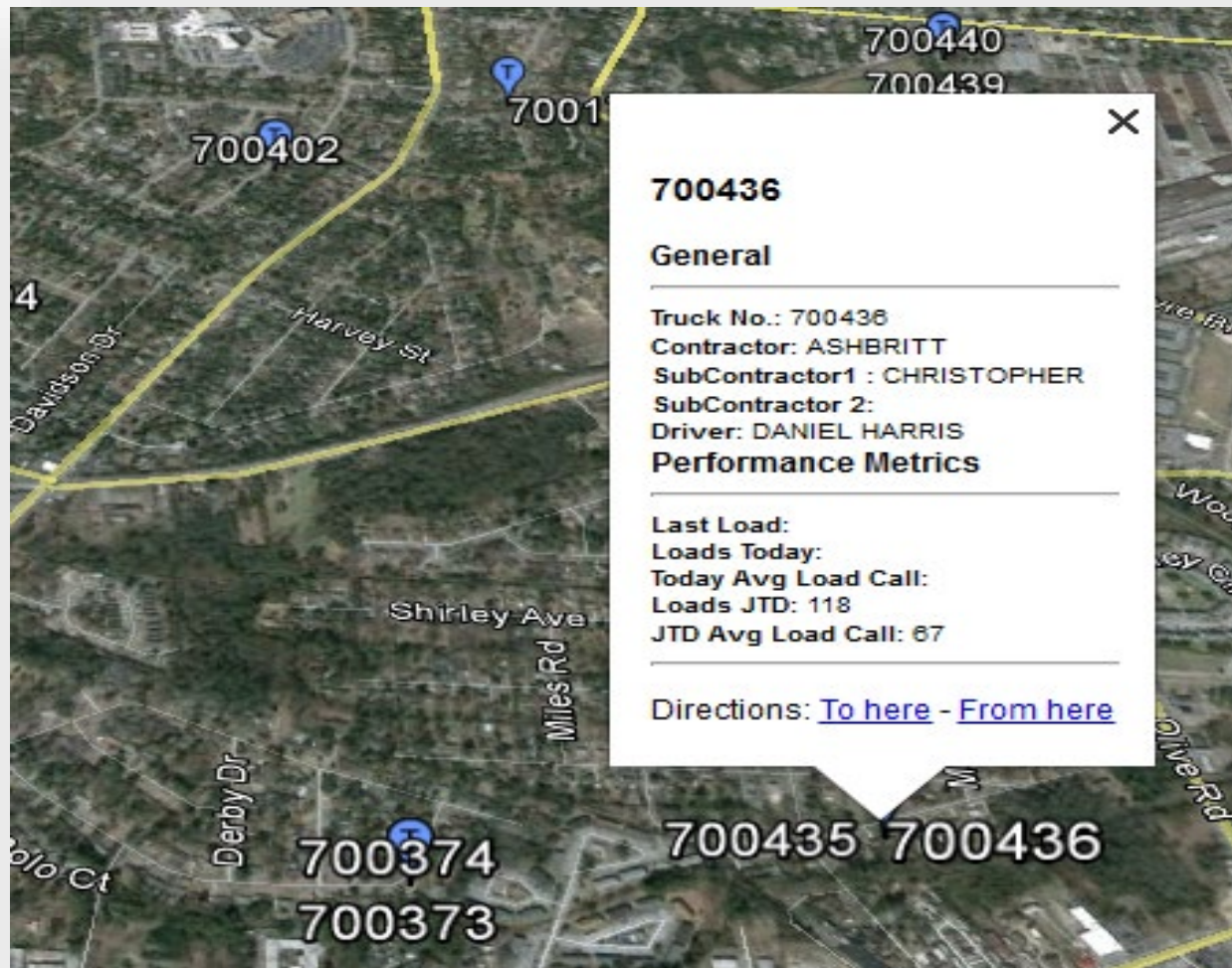
Recovery: 2 Weeks-1 Month

- Maintain and evaluate ROW cleanup.
- Begin ROW stump removal as necessary.
- Open additional DMS locations as necessary.
- Continue daily meetings with FEMA.
- Begin debris removal from private property and gated communities.
- Communicate project close-out to residents via press release.

Additional Passes Throughout the Community



ADMS Truck Locations



Stump Removal

- Removal of a stump and filling the root ball hole are eligible if 50 percent or more of the root ball is exposed.
- Grinding a stump in place is eligible if it is less costly than removal.



Recovery: 1 Month-3 Months

- Maintain and evaluate ROW cleanup - vegetative and construction and demolition (C&D).
- Initiate haul-out.
- Progress to weekly meetings with FEMA.

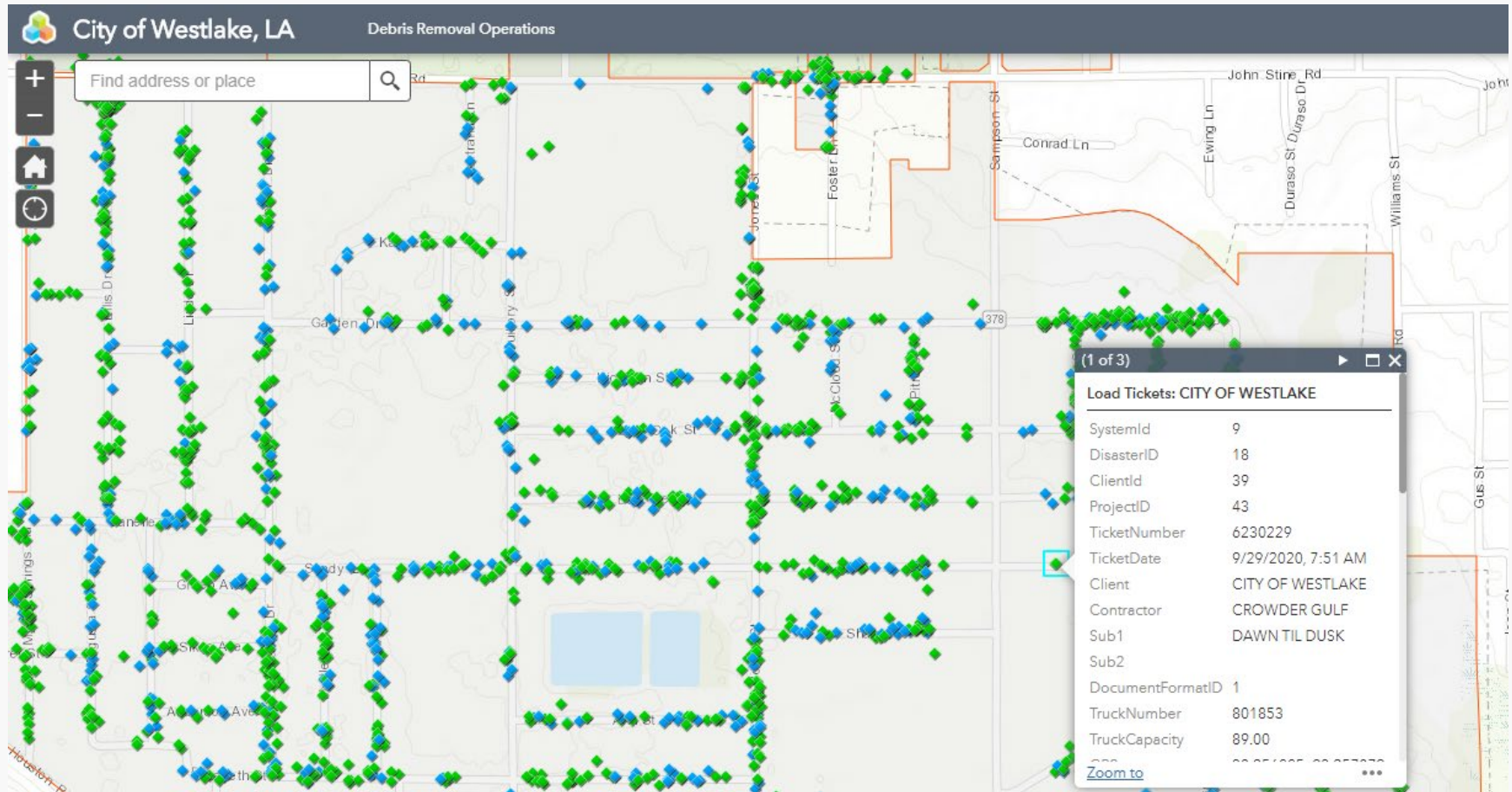


Special Debris Recovery Operations

Leaning Tree and Dangerous Hanging Limb Removal



ADMS Unit Rate Tracking Map



Parks and Recreational Areas Debris Removal



Private Property Debris Removal



Private Property Debris Removal

- Jurisdictions must provide a written request to the FEMA Federal Coordinating Officer before private property debris removal can begin.
 - Immediate threat determination
 - Documentation of legal responsibility
 - Indemnify the Federal Government



Private Property Debris Removal

- Documentation must include:
 - Right of Entry (ROE)/Hold Harmless Agreement (HHA)
 - Holds Federal Government harmless from any damages.
 - Includes stipulation that the owner will report to the jurisdiction any insurance settlements paid to the property owner for debris removal. A sample ROE/HHA can be found in Attachment 12.
 - Photos
 - Private property debris removal assessment
 - Documentation of environmental and historical review

Waterway Debris Removal

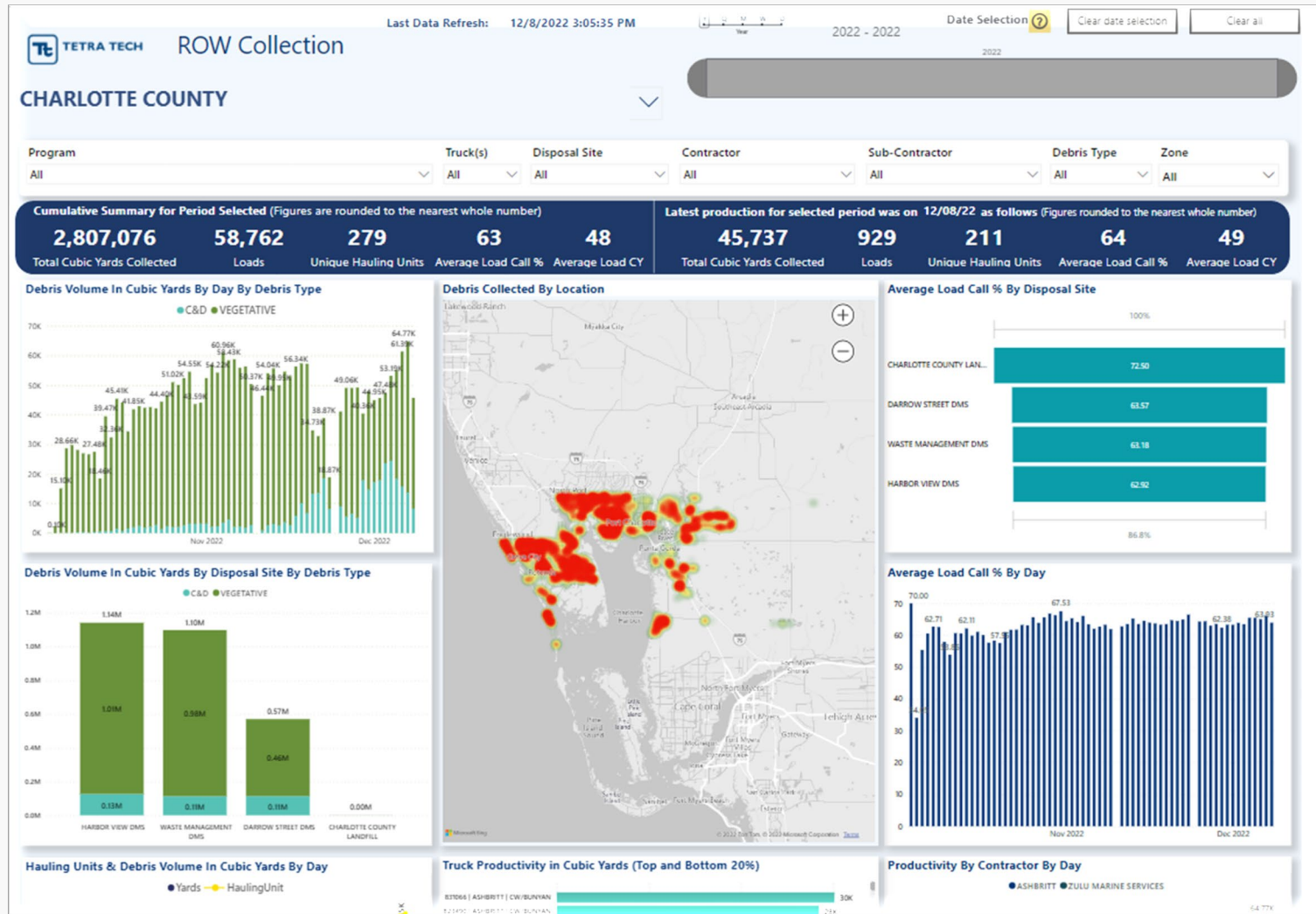


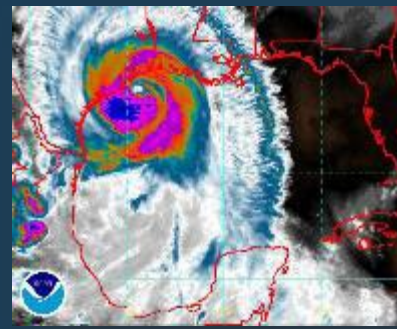
FEMA Photo

Recovery Activities: 3 Months-Project Completion

- Identify ineligible debris on ROWs.
- Complete disposal of reduced debris.
- Close out and remediate DMS locations.
- Conduct project close-out meetings with FEMA and external agencies.

ADMS Customized Reports





Part 3: Debris Management Sites



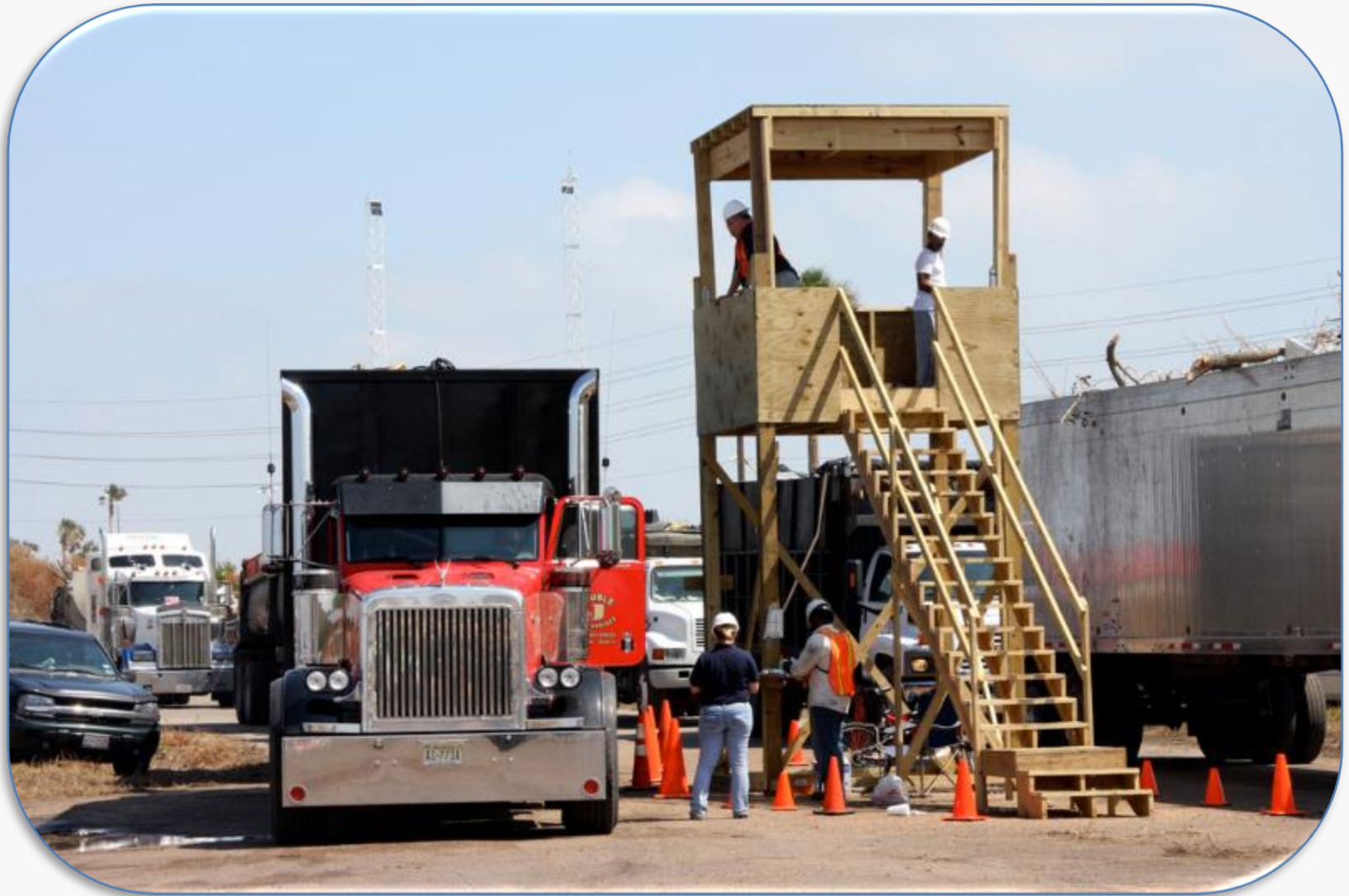
Debris Management Sites (DMS)

- Temporary locations where debris can be stored and reduced before recycling or disposal.





Loads Graded at an Inspection Tower



Unloaded Debris at a Staging Area



Stockpiled Debris



Reduction via Air-Curtain Incineration.

- Reduces volume by burning



Reduction via Chipping/Grinding



Reduction - Recycling



Debris Diverted from Waste Stream



Site Selection Considerations

- Public owned versus private owned.
 - The advantage of using public-owned properties is eliminating potential costs associated with acquiring, leasing, or operating on private property.
 - An agreement would need to be executed between the jurisdiction and the private property owner to use the site as a DMS.



Site Selection Considerations

- At least 5 acres.
 - Sites smaller than 5 acres are generally too small to properly accommodate debris staging and reduction operations but can be utilized if necessary.



Site Selection Considerations

- Proximity to High Population Density.
 - DMS locations near high population densities increase traffic congestion and create logistical and safety hazards for the community, especially immediately following an incident.



Site Selection Considerations

- Ingress and Egress.
 - Safe and adequate ingress and egress of the sites along with efficient road access to routes leading to and from the sites are critical to ensure efficient operation and turnaround of debris collection vehicles.



Site Selection Considerations

- Adherence to All Local, State, and Federal Rules, Regulations, and Ordinances.
 - DMS operations must adhere to local, county, state, and federal rules and regulations, including those pertaining to environmental quality and noise control.

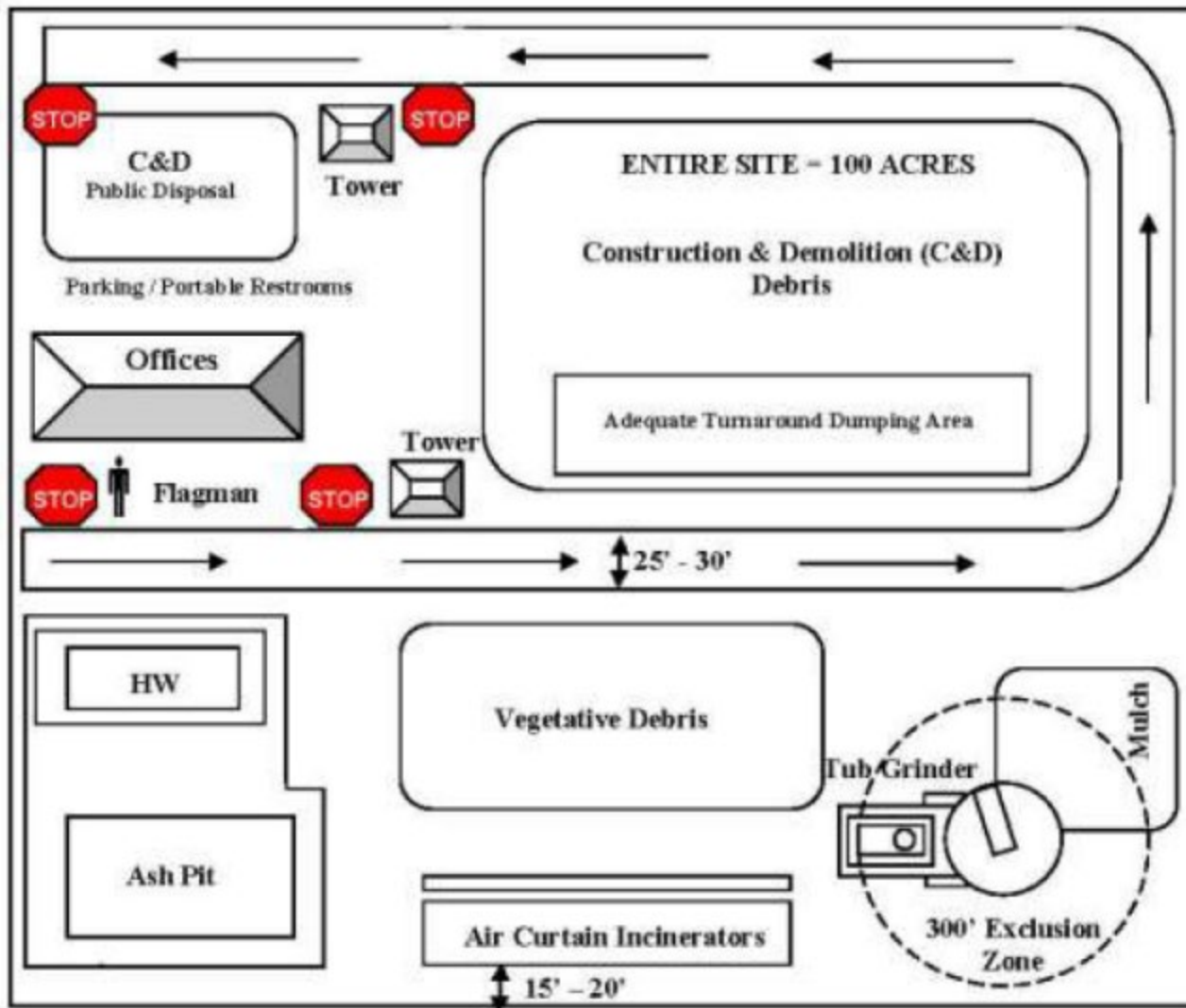


Site Selection Considerations

- Proximity to Natural Running Water or Potable Water Wells.
 - Before a DMS can be permitted for use, TCEQ must be notified and provide approval. The presence of any natural stream, creek, pond, or lake as well as any potable water wells can hinder the permitting of a property.



DMS Preparation and Organization



Source: FEMA, 2007

Residential Drop Off (RDO) Sites

- RDO sites give residents the opportunity to self-haul their disaster debris to a managed staging area for future pick-up by jurisdiction crews or contractors.
- Hours of operation as well as guidance regarding the debris that is acceptable for disposal at the site would need to be clearly communicated to the public.
- Staff would need to be on-site to direct traffic and to ensure debris is managed properly and safely.



DMS Approval

- The jurisdiction must seek approval from the Texas Commission on Environmental Quality (TCEQ) to operate a DMS.
- The approval form must be sent to the appropriate TCEQ regional office.
- The form is located at:

<https://www.tceq.texas.gov/downloads/response/tceq-20660.pdf>

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ)
REQUEST FOR APPROVAL OF TEMPORARY DEBRIS MANAGEMENT SITE FOR DEBRIS RESULTING FROM STATE OR FEDERAL DISASTER

REQUIREMENTS:

- The owner of the property should submit this request to temporarily store debris to the appropriate TCEQ Regional Office: <https://www.tceq.texas.gov/agency/directory/region/reglist.html>. Material stored for longer than the approval period may be considered solid waste and the site may be subject to permitting requirements and Texas Administrative Code (TAC) Chapter 330 rules, including providing financial assurance for the site.
- Requests may be submitted prior to a disaster; however, the owner or operator of the property may not store or process debris on the site until the site is approved by the TCEQ. Once the owner or operator of the property decides to use the site, notice must immediately be made to the local TCEQ Regional Office.
- **IT IS THE RESPONSIBILITY OF THE OWNER/OPERATOR TO MEET ALL GENERAL CONDITIONS AT THE TIME OF USE.** This notice does not allow any activity that creates or contributes to a nuisance condition and only applies to the management of debris generated by a natural disaster.

NAME OF DISASTER: _____
(To be updated during site activation notification)

REQUESTING AUTHORIZATION FOR A (Check all that apply):
 Staging/Stockpiling Site Emergency Burial Site Emergency Burn Site Wood Chipping Site

SITE INFORMATION:
Site Name: _____
Site Address: _____
Location and/or Directions to Site: _____
Nearest City: _____ County: _____
Site Lat/Long (in digital degrees to 5 decimal places): _____
Site Legal Description: _____

SITE OWNERSHIP INFORMATION:
Site Ownership (Check one) Local Government State or Federal Government Private Landowner
Site Owner Name: _____
Site Owner Address: _____
Site Owner Phone: _____ Site Owner E-Mail: _____
Approximate Size of Property: _____

REQUESTOR INFORMATION (If different from property owner):
Requestor Name: _____ Title: _____
Requestor Company Name: _____
Requestor Address: _____ City: _____ Zip Code: _____
Requestor Telephone: _____ Fax: _____ E-mail: _____
Requestor Affiliation to Site: _____
Requestor Contact Person/Project Manager Name (If different): _____
Requestor Contact Person/Project Manager Phone: _____ E-mail: _____

SITE CONTRACTOR INFORMATION:
Site Contractor Name: _____ Company Name: _____
Site Contractor Address: _____
Site Contractor Phone: _____ E-mail: _____

TCEQ-20660 (Rev. 02/08/2023) Page - 1 - of 4

Videotape and/or Photograph the Site

- Thoroughly videotape and/or photograph (ground or aerial) each site before beginning any activities. Periodically update video and photographic documentation to track site evolution.



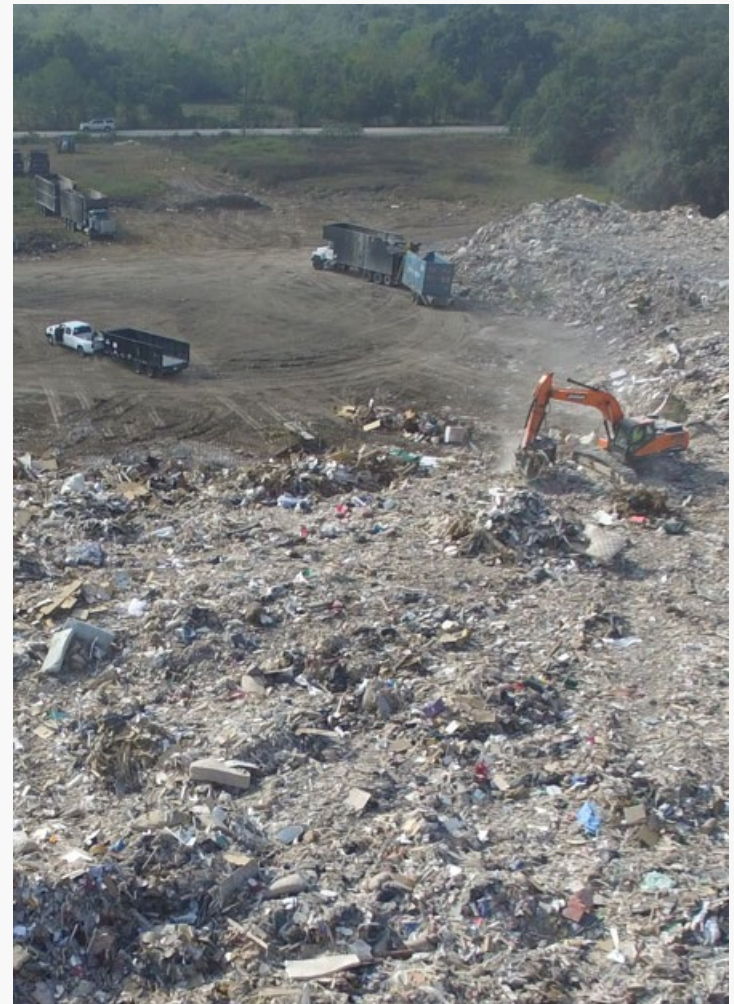
Document Physical Features

- Note existing structures, fences, culverts, irrigation systems, and landscaping that can help evaluate possible damage claims made later.



Investigation of Historic Significance.

- Research the past use and ownership of the
- property to document any issues regarding the existence of historic structures or
- archeological sites. The SHPO may have information about the property.



Sample Soil and Water

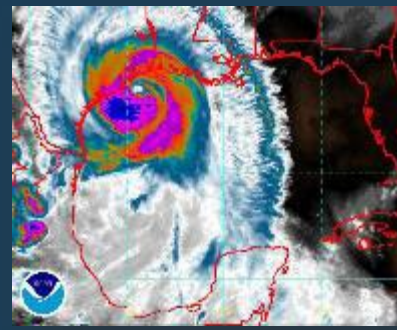
- Soil and groundwater samples should be collected prior to use of the site.



Post-Event DMS Remediation

- When the site operations are complete, the property must be restored to its original condition before returning the site to the property owner.



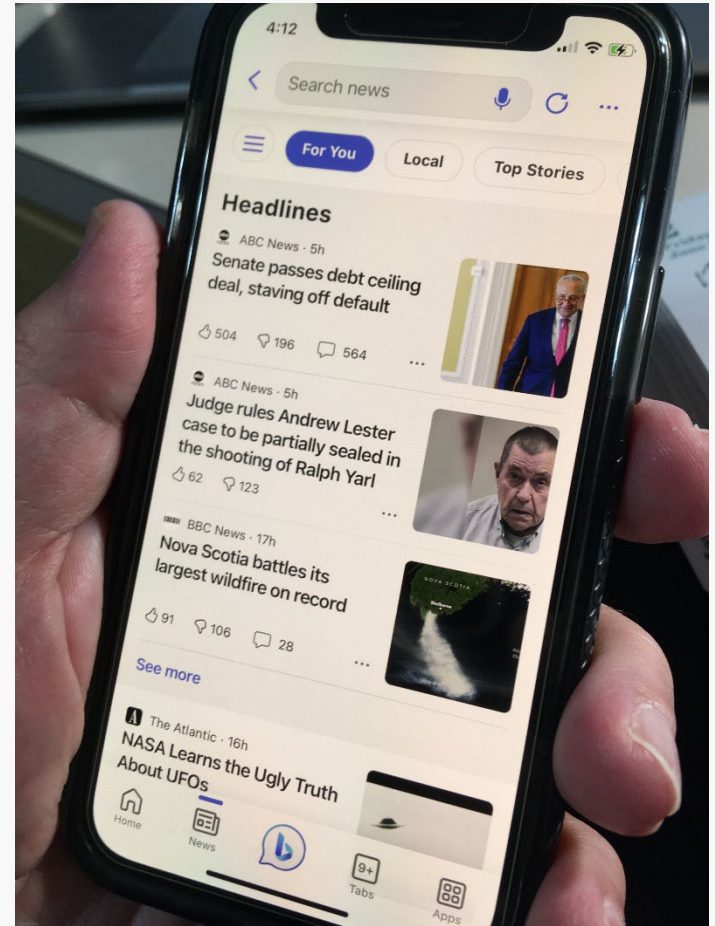


Part 4: Public Information

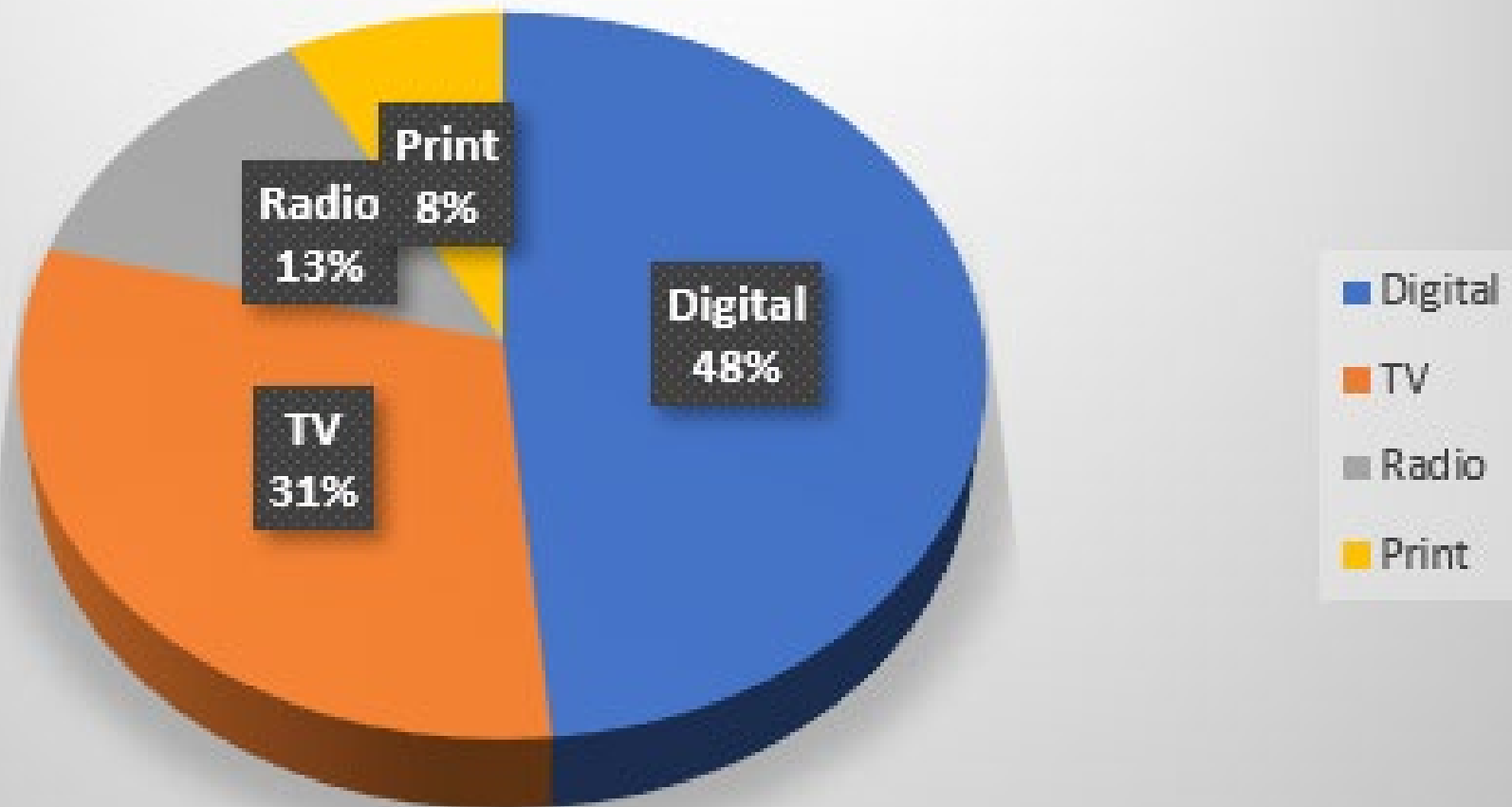


The Changing Face of Public Information

- There is a transition of the news industry away from print, television and radio into digital spaces.
- 82% of U.S. adults say they often or sometimes get their news from a smartphone, computer or tablet.

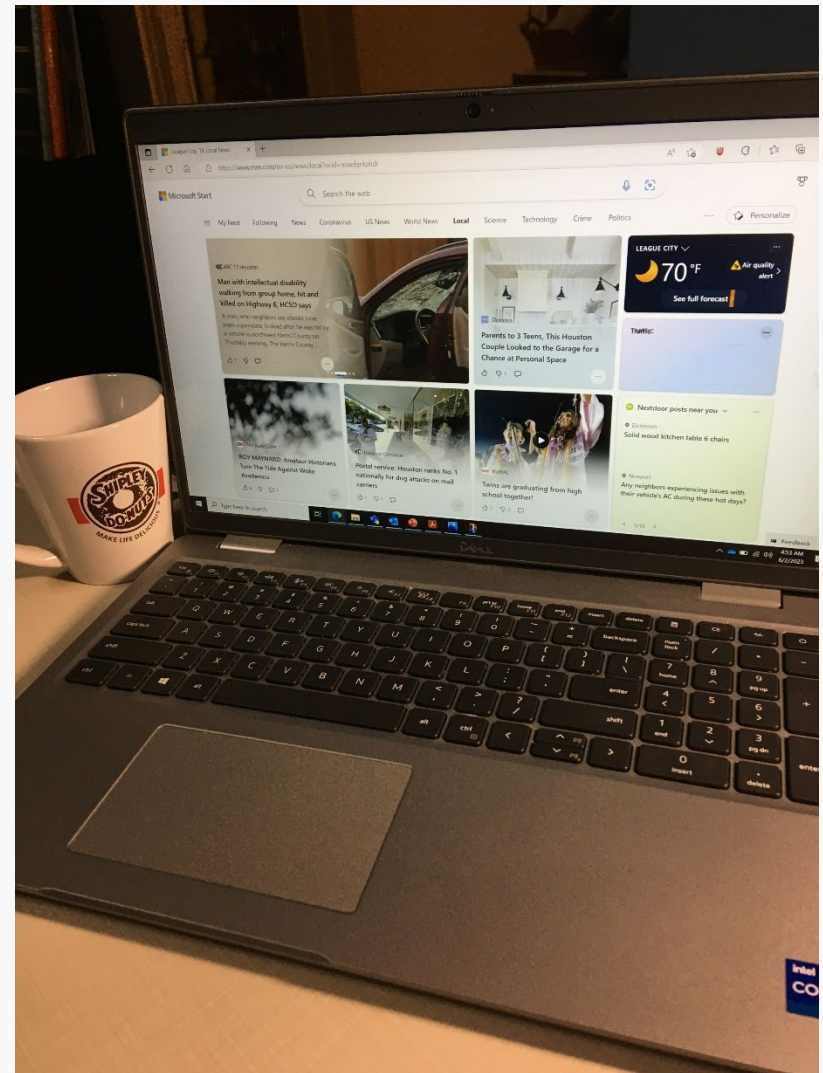


How the Public Receives Their News



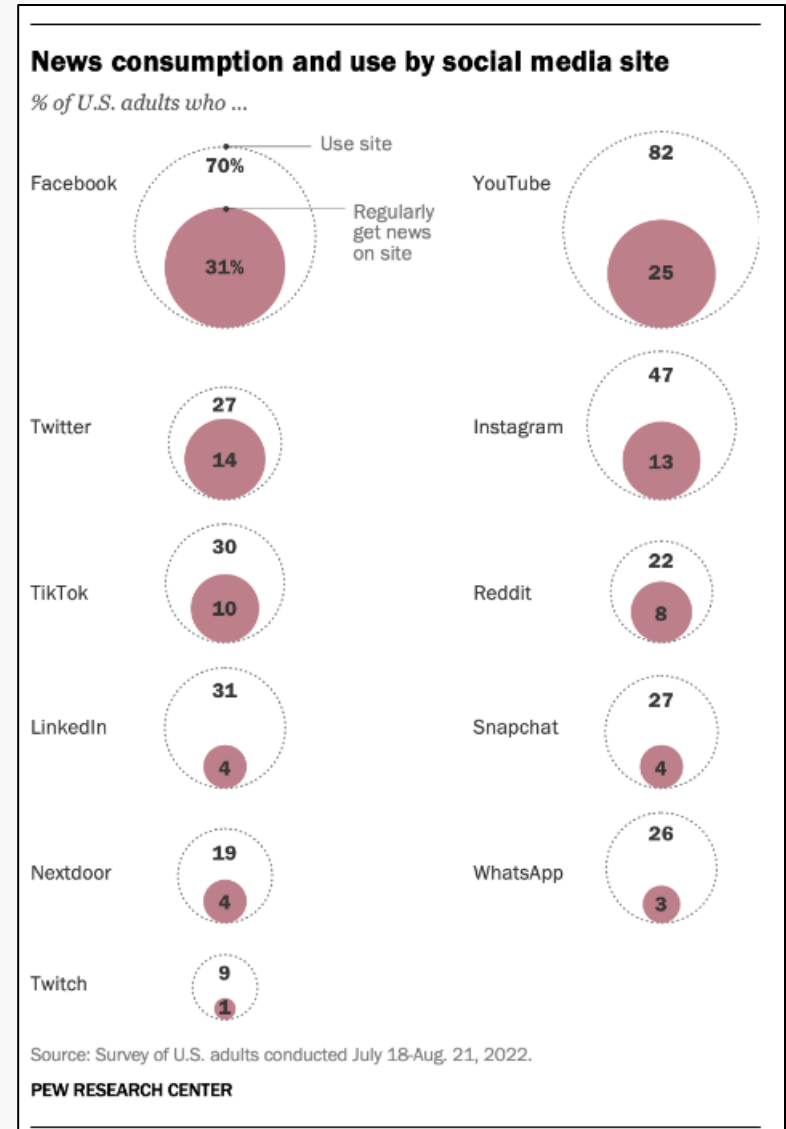
The Changing Face of Public Information

- Among digital platforms, news websites or apps are the most preferred source for news.



The Changing Face of Public Information

- Roughly a third of U.S. adults (31%) say they regularly get news from Facebook.



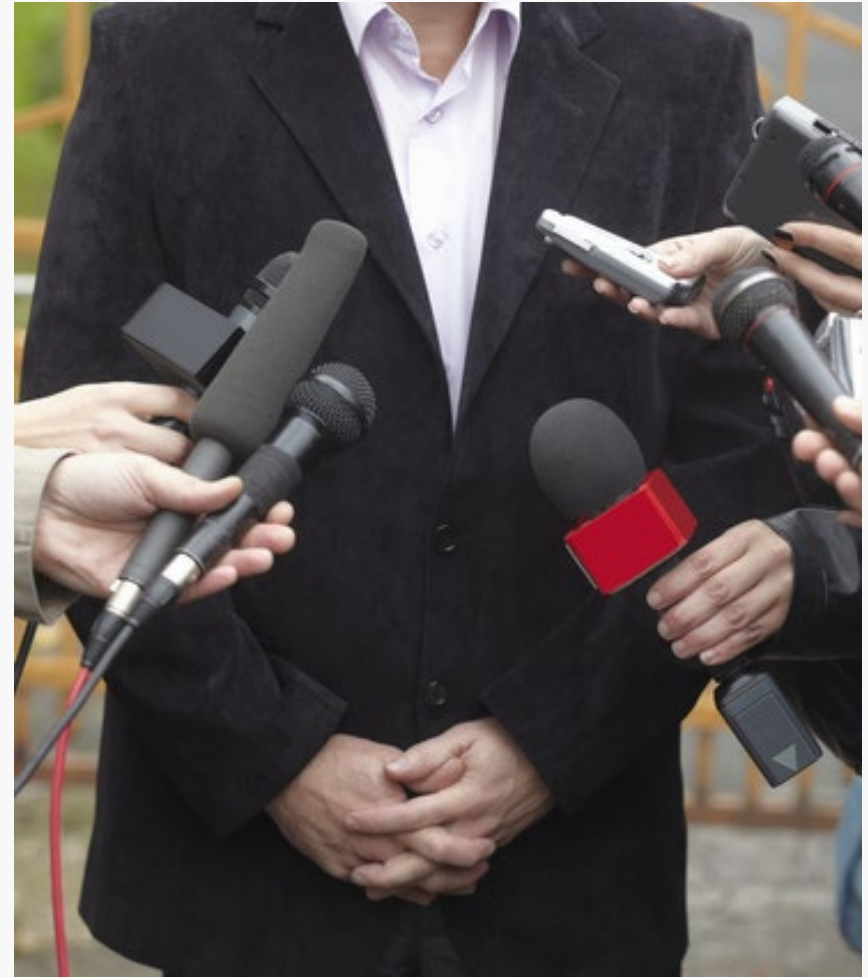


The Changing Face of Public Information

- 23% of Americans use Twitter. 69% of those users get news on the site.

Public Information in Debris Management

- Use website, news media, social media, municipal channels.
- Provide instructions to residents on debris separation.
- Provide realistic updates on the status of debris operations.
- Monitor social media.
- Exercise rumor control.
- Collaborate with stakeholder agencies in messaging.



Proper Debris Set-Out Methods

Separating Your Debris

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

NO PICKUP ZONE
Any debris placed from the sidewalk toward your property will not be picked up.

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.

Normal Household Trash
Normal household trash and bagged debris of any kind will not be picked up with disaster debris. You should continue to follow your normal garbage removal schedule.

VEGETATIVE 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.

Developing Messages

- Express empathy
- Provide relevant, up-to-date information
- Use plain language
- Avoid cliches
- Promote action
- Show respect
- Promote collaboration
- Ensure that written products are 508 compliant

Trolls



- Sometimes people use social media to rant or provoke others to anger. Ignore posts like these. Do not feel obligated to engage with every comment.

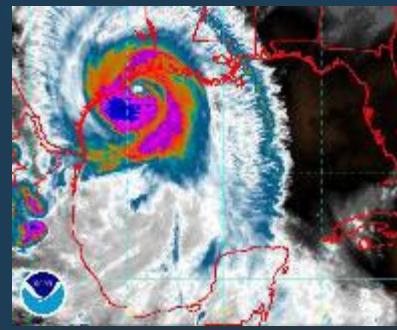
Preparedness for No-Notice Incidents

- Pre-identify and pre-train a core group of personnel to serve as spokespersons.
- Develop message templates that can quickly be adapted in response to a no-notice incident.



Response to No-Notice Incidents

- Provide regular updates even if the situation has not changed.
- Include websites and social media in your communication efforts.
- Designate media monitors to watch coverage for incorrect information. Issue corrections, as necessary.
- Understand that some members of the press will aggressively pursue a story. Work with them to help them meet deadlines as much as possible.



Part 5: Managing Finances While Mitigating Risk



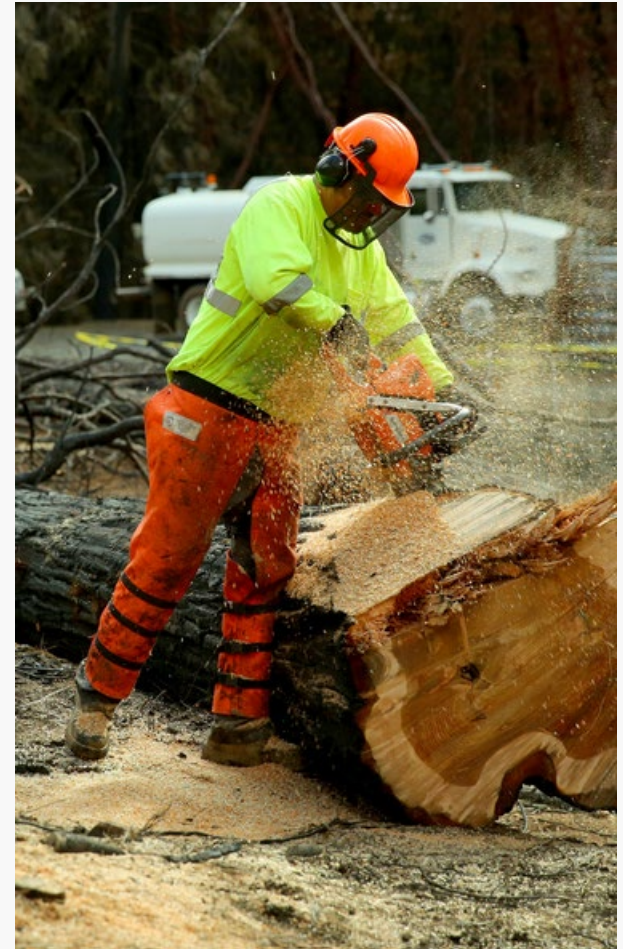
Document Force Account Expenses

- Have a system in place to track force account hours and activities.

ACTIVITY LOG (ICS 214)			
1. Incident Name: _____		2. Operational Period: Date From: _____ Date To: _____	
		Time From: _____ Time To: _____	
3. Name: _____		4. ICS Position: _____	5. Home Agency (and Unit): _____
6. Resources Assigned:			
Name		ICS Position	Home Agency (and Unit)
7. Activity Log:			
Date/Time	Notable Activities		
8. Prepared by: Name: _____		Position/Title: _____	Signature: _____
ICS 214, Page 1		Date/Time: _____	

Documentation of Hours and Expenses

- Staff - Names of staff, title and function, work performed, pay rate, days and hours worked, pay policy, fringe rates.
- Owned Equipment - Type, size, locations, operator name, rates.
- Rented Equipment - Rental agreement, days used.



Documentation of Hours and Expenses

- Supplies - Type and quantities used, inventory records.
- Mutual Aid - Written agreement, services requested and received, invoices.



Documentation of Hours and Expenses

- Donated resources -
Names of individuals,
activities,
equipment, supplies,
cost estimates,
direct administrative
costs, etc.



Prepositioned Contracts

Prepositioned Contracts

- FEMA encourages jurisdictions to award prepositioned contracts, or advance contracts, before an incident occurs.
 - Allows applicants to conduct a deliberate procurement process outside of the pressure and immediate demands of a disaster.
 - Helps to ensure that jurisdictions have contractors ready to perform work quickly after an incident occurs.

Pre-Positioned Contracts

- Other communities may be competing with the same resources following a disaster.
- Can save time in an emergency.
- Provides an opportunity to negotiate better rates than at the time of an emergency.
- Contractors may be stretched thin and may not be willing to take on any new business after a disaster.



Prepositioned Contract Checklist.

The Jurisdiction Must Ensure:

- Full and open competition.
- The scope of work includes anticipated disaster work.
- Include small and minority businesses, women's business enterprises, and labor surplus area firms when in the solicitation.
- Evaluate and document the contractor's integrity, compliance with public policy, record of past performance, and financial and technical resources.

Prepositioned Contract Checklist.

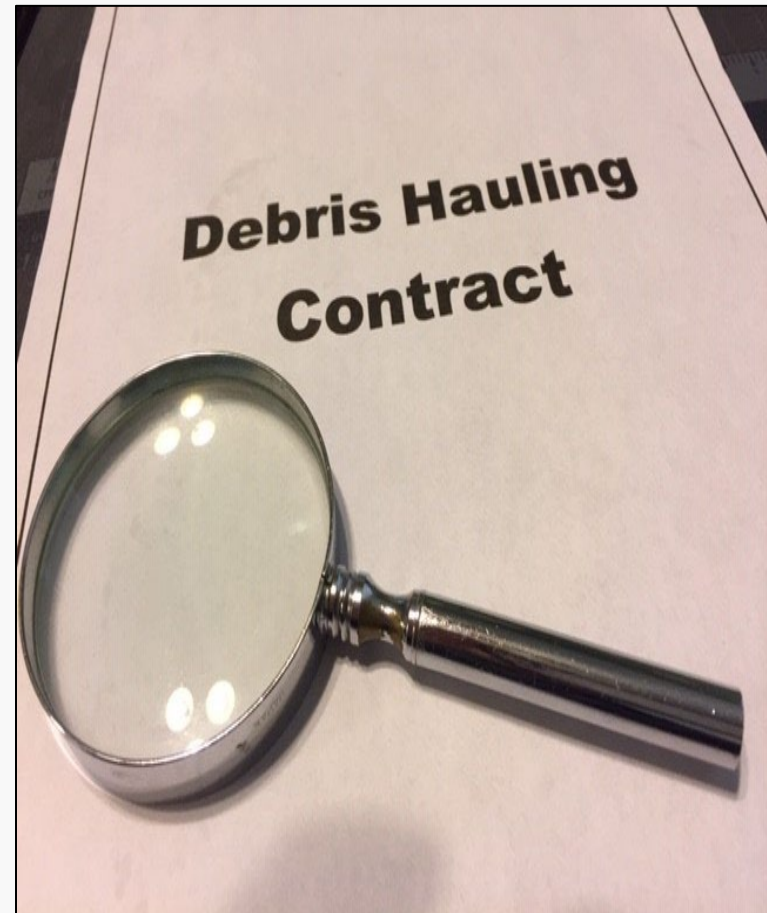
The Jurisdiction Must Ensure:

- Ensure that the contractor was not suspended or debarred.
- Prohibit the use of statutorily or administratively imposed geographic preferences in evaluating bids or proposals except where expressly encouraged by applicable Federal law.
- Exclude contractors that develop or draft specifications, requirements, statements of work, or invitations for bids or requests for proposals.

Prepositioned Contract Checklist.

The Jurisdiction Must Ensure:

- The contract was procured in compliance with the federal procurement regulations.
- Contract costs are reasonable in the current market environment.



Procurement Methods

- FEMA may reimburse costs incurred under a contract procured through a noncompetitive proposal only when:
 - The item is only available from a single source.
 - The public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation.
 - FEMA or the Recipient expressly authorizes a noncompetitive proposal in response to a written request from the Applicant.
 - After solicitation of a number of sources, competition is determined inadequate.

Types of Contracts

- FEMA reimburses costs incurred using three types of contract payment obligations:
 - Fixed price
 - Cost-reimbursement
 - Time and materials (to a limited extent)

FEMA does not reimburse costs incurred under a cost-plus-percentage-of-cost (CPPC) contract or a contract with a percentage of construction cost method.

Required Provisions

- Equal Employment Opportunity
- Copeland “Anti-Kickback” Act
- Davis-Bacon Act
- Contract Work Hours and Safety Standards Act
- Clean Air Act and the Federal Water Pollution Control Act
- Byrd Anti-Lobbying Amendment
- Debarment and Suspension
- See 2 CFR §215.48 for contract provision requirements.

Procurement Disaster Assistance Team (PDAT) Field Manual

- Provides guidance regarding the mandatory requirements for FEMA award recipients and subrecipients using federal funding to finance the procurement of property and services.
- Found at:

https://www.fema.gov/sites/default/files/documents/fema_PDAT-field-manual_102021.pdf



Procurement Disaster Assistance Team (PDAT) Field Manual

Procurement Information for FEMA Award Recipients and Subrecipients

October 2021

(FM-207-21-0002)



Scoring and Contractor Selection

- Maintain records sufficient to detail the history of the procurement:
 - Rationale for the method of procurement
 - Selection of contract type
 - Contractor selection or rejection
 - The basis for the contract price





Thank You!