



CITY OF  
**SOUTHLAKE**



**Disaster Debris  
Management Plan**

February 2021



# City of Southlake, Texas Disaster Debris Management Plan

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## 1.1 Overview

### 1.1.1 Purpose

The City of Southlake, Texas (City) approved the preparation of this Disaster Debris Management Plan (DDMP) to better respond to emergency debris removal situations. The purpose of this plan is to outline the components critical to the success of a debris removal operation in the City. This plan provides key information that will help the City coordinate and effectively manage a turn-key debris removal effort if the City is affected by a major debris-generating incident. Central to the success of debris removal operations is the City's understanding of the following elements prior to a debris-generating incident:

- The parties involved and their roles and responsibilities regarding the debris removal operation;
- The rules, regulations, and guidelines enacted by the Federal Emergency Management Agency (FEMA) and other agencies governing debris removal;
- The process of collecting debris; and
- The disposal of debris, including where the debris will be staged for reduction and/or hauled to final disposal.

### 1.1.2 Plan Development

This plan provides a coordinated response blueprint for the City and other organizations and contract debris hauling and monitoring firms with a role in disaster debris operations. Departments within the City, as well as regional and private planning partners, have been instrumental in the development of the plan and in clarifying roles and responsibilities in the event of a debris-generating incident. Planning efforts have included participation in a project kickoff meeting with all City departments with a role in the plan, participation in department-specific meetings to ascertain responsibilities and to determine resources that can be brought to bear in debris-generating incidents, and the collection of data needed for development of the plan. City departments with a role in development of the plan include the following:

- City Attorney's Office
- City Manager's Office
- Community Services
- Emergency Management
- Finance
- Fire Department

## Section 1

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- Human Resources
- Marketing and Communications
- Office of Performance Excellence
- Planning and Development
- Police Department
- Public Works

## 1.2 Authority

This DDMP is developed, promulgated, and maintained under the following city, state, and federal statutes and regulations:

### City

- City of Southlake Code of Ordinances
  - Chapter 4 – Animals, Fowl, Insects and Reptiles
    - Section 4-400: Disposal of dead animals
  - Chapter 4.5 – Buildings and Building Regulations
    - Article IX: Property Maintenance Code
    - Article XIII: Dangerous and Substandard Buildings
  - Chapter 7 – Civil Emergencies
    - Article II – Emergency Management
  - Chapter 9.5 Environment
    - Article II: Storm Drainage Policy
    - Article V: Flood Hazard Reduction
    - Article VI: Tree Preservation
  - Chapter 10 – Health and Sanitation
    - Article II – General Health Regulations
      - Section 10-32 Nuisances – Declared enumeration
      - Section 10-33 Same-Abatement
      - Section 10-34 Garbage and Refuse
      - Section 10-47 Fairgrounds, Public Parks and Amusement Centers
      - Section 10-48 Industrial Establishments
  - Chapter 16 – Solid Waste
    - Article I – In General

- Article II – Refuse Collection
- Chapter 18 – Traffic and Vehicles
  - Article VI: Abandoned and Junked Vehicles
- Public Works Emergency Response Team Mutual Aid Agreement

### State

- Local Government Code, 54.018 Action for Repair of Demolition of Structure
- Government Code, Title 4, Subtitle 418, Chapter 418, Emergency Management; Sec 418.023 Clearance of Debris; Sec 418.0425 State Emergency Management Plan Annex
- Texas Administrative Code, Title 37, Part 1, Chapter 7; Subchapter A, Emergency Management Program Requirements; Subchapter C
- Health and Safety Code, Title 5, Subtitle A, Chapter 343 Abatement of Public Nuisances; Subtitle B, Chapter 361 Solid Waste Disposal Act

### Federal

- Sandy Recovery Improvement Act (SRIA) included as Division B of the Disaster Relief Appropriations Act, PL 113-2, signed into law January 29, 2013
- Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 100-707, signed into law November 23, 1988; amended the Disaster Relief Act of 1974, PL 93-288
- U.S. Code, Title 23 Highways, Part 125 Emergency Relief Section 1107 Public Law 112-141 Moving Ahead for Progress in the 21st Century Act (MAP-21), July 2012
- Title 2 Code of Federal Regulations, Part 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (2 CFR 200)
- US Code, Title 42, Chapter 103, Comprehensive Environmental Response, Compensation, and Liability (CERCLA) and Title III of Superfund Amendments and Reauthorization Act of 1986 (SARA)
- Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. §9601 et seq
- Resource Conservation and Recovery Act, 42 U.S.C. §69012 et seq
- Federal Clean Water Act, 33 U.S.C. §1251 et seq
- Toxic Substances Control Act, 15 U.S.C. §1601 et seq
- Occupational Safety and Health Act, 29 U.S.C. §651 et seq
- Hazardous Materials Transportation Act, 49 U.S.C. §1802 et seq

## 1.3 References

The following references were used in the development of the plan:

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### Local

- City of Southlake Emergency Management Plan
- City of Southlake Employee Handbook, Section 10 – Safety
- City of Southlake, Safety Guiding Principles
- City of Southlake Public Works Emergency Debris Management Standard Operations Plan

### County

- Tarrant County Hazard Mitigation Action Plan, 2020

### State

- Managing Debris from Declared Disasters, TCEQ 2017
- State of Texas Emergency Management Plan, Annex K: Public Works and Engineering

### Federal

- FEMA Comprehensive Planning Guide 102 Version 2
- FEMA Publication FP 104-009-2 – Public Assistance Program and Policy Guide, 2020
- FEMA 329 Debris Estimating Field Guide, September 2010
- FEMA Public Assistance Alternative Procedures Pilot Program Guide for Debris Removal, Version 6.1, June 28, 2018
- FEMA Public Assistance Alternative Procedures EMMIE Cost Codes for Debris Removal
- National Response Framework, Department of Homeland Security, Third Edition, June 2016
- Pre-Disaster Recovery Planning Guide for Local Governments, FEMA, February 2017
- National Disaster Recovery Framework, Second Edition, Department of Homeland Security, June 2016

## 1.4 Incidents and Assumptions

### Population and Demographics

An important consideration in disaster debris management is the population of the area to be served under the plan and factors relating to demographics that will need to be considered in developing strategies for debris removal strategies and communications. According to the U.S. Census Bureau, in July 2019, the population of the City was 32,376. 15.3% of the population speaks a language other than English at home.<sup>1</sup> The City will need to ensure that public information regarding set-out procedures and the safe handling of debris is accessible in multiple formats. In addition, 8.6% of the population is over the age of 65, and approximately 2.2% of the population lives in poverty.<sup>2</sup> During disasters, populations with functional and access needs and socio-

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<sup>1</sup> U.S. Census Bureau, QuickFacts Southlake City, Texas, <https://www.census.gov/quickfacts/southlakecitytexas>

<sup>2</sup> Ibid

economic barriers, which may include persons over the age of 65 and persons in poverty, often have less access to resources and support. The City will consider the needs of these populations in planning and in response to a debris-generating incident.

### Physical Characteristics

The City encompasses approximately 22.5 square miles. The bulk of the City of Southlake lies within Tarrant County, but the northernmost portion of the City falls within Denton County. The topography in the City is hilly, rolling, and well-drained. The geographic location of the City makes it susceptible to several types of incidents that could result in widespread disaster debris, including tornadoes, severe thunderstorms with high winds, flooding, and winter storms.

With regard to debris removal efforts, this plan assumes the following:

- The greatest threat of a debris-generating incident to the City is in the form of a severe weather system, such as a tornado or thunderstorm.<sup>3</sup>
- The response and recovery outlined in this plan is designed to address two types of debris-generating scenarios:
  - **Scenario 1:** Low Probability – High Consequence Incidents
  - **Scenario 2:** High Probability – Medium Consequence Incidents
- In the event of a debris-generating incident, the City may activate one or more debris removal contractors.
- In the event of a debris-generating incident, the City may activate a monitoring firm.
- If warranted, the City will request federal assistance from FEMA through the State.
- The City will be operating under the current Public Assistance (PA) guidelines for reimbursement, as described in the Stafford Act. Changes to the PA Program or published program-specific guidance may result in a revision to the DDMP or its implementation.

### 1.4.1 Incident Description

The multi-hazard DDMP is designed to address numerous debris-generating incident scenarios. For the purposes of the DDMP, two scenarios have been developed based on maximum impact, ability to respond, and frequency of incident.

#### Scenario 1: Low Probability – High Consequence

This scenario focuses on catastrophic debris-generating incidents that may significantly impact the City. In this case, resources are severely strained throughout the entire region, and a Presidential Disaster Declaration for Category A is immediate or imminent due to:

- Long-term impacts to roads, bridges, and highways;
- Composition of debris includes vegetative and construction and demolition (C&D) debris; and
- Post-incident debris estimates have the potential to exceed 100,000 cubic yards (CY).

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<sup>3</sup> Tarrant County Hazard Mitigation Action Plan, 2020

## Section 1

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This incident is best described as a severe tornado or high-wind storm (above 111 mph). The period for debris removal and demobilization may last from 3 months to 1 year and beyond.

The National Oceanic and Atmospheric Administration (NOAA) National Weather Service utilizes the Enhanced Fujita (EF) Scale to rate the severity of tornadoes. The table below describes the EF Scale and associated wind speed categories.

**Table 1-1: EF Scale<sup>4</sup>**

Fujita Scale			Derived EF Scale		Operational EF Scale	
F Number	Fastest ¼ Mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)	EF Number	3 Second Gust (mph)
0	40-72	45-78	0	65-85	0	65-85
1	73-112	79-117	1	86-109	1	86-110
2	113-157	118-161	2	110-137	2	111-135
3	158-207	162-209	3	138-167	3	136-165
4	208-260	210-261	4	168-199	4	166-200
5	261-318	262-317	5	200-234	5	Over 200

### Scenario 2: High Probability – Medium Consequence Impact

This scenario focuses on those higher frequency debris-generating incidents that may impact the City. These incidents may be characterized as those that do not immediately receive a Presidential Disaster Declaration for Category A:

- Short-term impacts to roads, bridges, and rail lines;
- Composition of debris is primarily vegetative with limited C&D and white goods; and
- Post-incident debris estimates do not exceed 100,000 CY.

This incident is best described as a severe thunderstorm with high winds (65–110 mph). The period for clean-up may last from 1 to 2 months. Depending on the severity of the incident, debris management site (DMS) locations may or may not be operational. In this case, the City may choose to rely on local contractors or force account labor.

## 1.5 Debris Volume Estimate

The debris volume generated by an incident will depend on the type of incident. Table 1-2 describes the debris-generating disaster incidents that may affect the City. The table also illustrates

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<sup>4</sup> The EF Scale is a set of wind estimates (not measurements) based on damage. Its uses 3-second gusts estimated at the point of damage based on a judgment of levels of damage to various indicators. These estimates vary with height and exposure. The 3-second gust is not the same wind as in standard surface observations. Standard measurements are taken by weather stations in open exposures, using a directly measured 1-minute mile speed.

the probability of the disaster incident occurring, the nature of the debris generated, the debris generation potential, and the widespread impact throughout the City.

**Table 1-2: Potential Disaster Incidents**

Type of Incident	Probability <sup>5</sup>	Nature of Debris	Debris Generation Potential <sup>6</sup>	Widespread Impact
Tornado	Occasional	Vegetative Construction and Demolition Personal Property Hazardous Waste Household Hazardous Waste White Goods Vehicles and Vessels Putrescent	Medium to High	Extensive
Flood	Occasional	Vegetative Construction and Demolition Personal Property Hazardous Waste Household Hazardous Waste White Goods Soil, Mud, and Sand Vehicles and Vessels Putrescent	Low to Medium	Limited
Severe Thunderstorm with High Winds	Highly Likely	Vegetative Construction and Demolition	Low to Medium	Extensive

For planning purposes, this plan will be based on debris volumes generated by an EF3 or stronger tornado. However, the guidance that follows in this plan will apply to all debris-generating incidents that may affect the City.

### 1.5.1 Debris Estimate – Scenario 1

For purposes of generating debris estimates for the DDMP under Scenario 1, the high-volume debris incident is assumed to be a major tornado impacting the City. While the tornadoes of this magnitude are rare, they have the greatest opportunity to generate debris and therefore will act as the basis for the high-volume debris estimate.

Table 1-3 provides information on tornadoes that have impacted the county with more than \$1 million worth of damage in the past and the estimated amount of property damage that was inflicted as a result.

<sup>5</sup> Tarrant County Hazard Mitigation Action Plan, 2020.

<sup>6</sup> The ability of a particular incident to produce debris based upon historical data on each incident. High could generate more than 1,000,000 cubic yards of debris; medium could generate more than 50,000–1,000,000 cubic yards; and low could generate 25,000–50,000 cubic yards of debris.

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**Table 1-3: Past Tornado Incidents Causing \$1 Million Or More In Damage in Tarrant and Denton Counties**

Date	County	Strength	Deaths/ Injuries	Property Damage	Length	Width
12/14/1971	Tarrant	F1	0/4	2 million	.1 miles	17 yards
4/5/1990	Tarrant	F2	0/0	2.5 million	.2 miles	10 yards
9/13/1993	Tarrant	F2	0/0	5 million	8 miles	100 yards
9/13/1993	Tarrant	F2	0/5	5 million	2 miles	100 yards
4/19/1995	Tarrant	F2	0/0	4 million	5 miles	50 yards
5/7/1995	Tarrant	F1	0/4	3.3 million	10 miles	300 yards
5/4/2001	Tarrant	F1	0/2	5 million	8 miles	150 yards
4/13/2007	Tarrant	EF1	1/0	2 million	6 miles	125 yards
4/23/2008	Tarrant	EF2	0/0	1 million	.31 miles	100 yards
4/3/2012	Tarrant	EF2	0/7	200 million	6.4 miles	150 yards
5/10/2015	Denton	EF1	0/0	3.5 million	5.19 miles	100 yards

Table 1-4 shows the number of F3/EF3 tornadoes that have occurred in Tarrant and Denton Counties since 1950. No tornadoes of greater intensity than an F3 or EF3 have been recorded during that time period. In an EF3 tornado, it is possible for entire stories of well-constructed houses to be destroyed, and severe damage can occur to large structures such as shopping centers. Trains can be turned over, and vehicles can be picked up and tossed into the air.

**Table 1-4: Past F3/EF3 Tornadoes in Tarrant and Denton Counties**

Date	County	Strength	Deaths/ Injuries	Property Damage	Length	Width
5/4/1960	Tarrant	F3	0/12	250,000	7.4 miles	500 yards
6/12/1966	Denton	F3	0/0	Some structure and vehicle damage. No dollar amount assigned.	3.6 miles	133 yards
3/28/2000	Tarrant	F3	2/80	0	4 miles	250 yards
3/28/2000	Tarrant	F3	0/0	0	7 miles	300 yards
4/15/2002	Tarrant	F3	0/0	250,000	2.1	80 yards

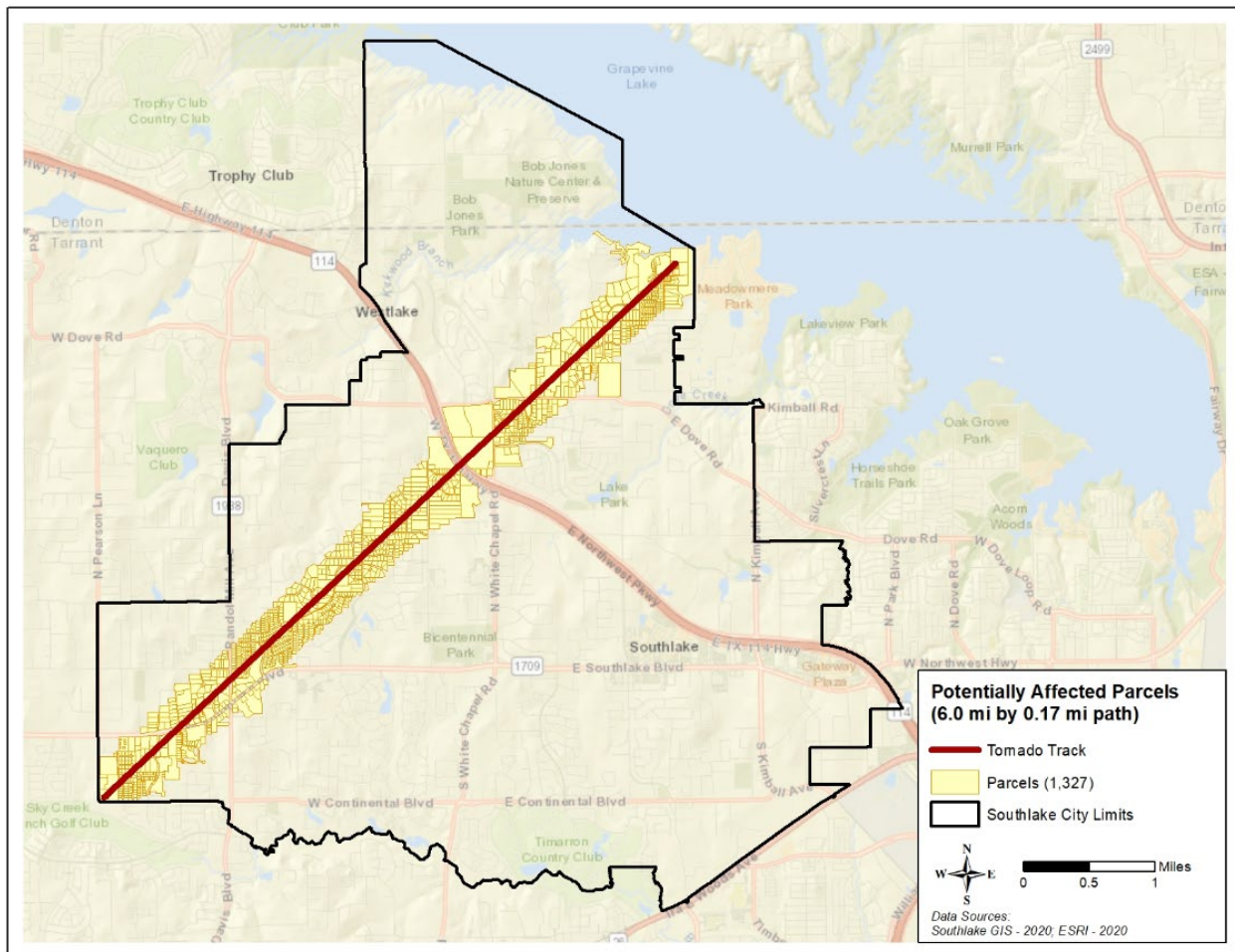


**Debris Forecast Formula**

The forecasted amount of residential debris in the City is based on the following formula for a totally destroyed household as described in Section 6 of FEMA 325. Estimates of the square footage of a one-story, single-family home in the City are used for this calculation. The average square footage of homes in Southlake, Texas, is estimated at approximately 4,000 square feet.<sup>7</sup>

A scenario using an EF3 tornado approximately 6 miles long, with a width of 300 yards, was used to determine the number of buildings/homes that would be affected. Using that scenario, it was determined that approximately 1,327 parcels would be affected by the tornado.

**Figure 1-1: Possible Tornado Scenario for the City of Southlake**



<sup>7</sup> Zillow Real Estate Company at [www.zillow.com](http://www.zillow.com).

## Section 1

The forecasted amount of residential debris in the City is based on the following formula for a totally destroyed household as described in Section 6 of FEMA 325. An estimate of a one-story, single-family home in the City that is approximately 4,200 square feet (70 feet by 60 feet) is used for this calculation.

**Figure 1-2: Totally Destroyed Household Formula**

Totally Destroyed Household Formula:  
 $L \times W \times S \times 20\% \times VCM = \text{CY of debris}$   
 $70' \times 60' \times 2 \times 0.20 \times 1.3 = 2,184 \text{ CY of debris}$

- L = Length of building in feet
- W = Width of the building in feet
- S = Height of building expressed in stories
- 20% = Reduction factor due to airspace in a single-family home
- VCM = Vegetative cover multiplier (Medium)

The resulting debris estimates were derived by taking the number of impacted parcels (with structures) multiplied by the average amount of CYs of debris generated from a totally destroyed household based on the formula in Figure 1-2. Percentages have been calculated to account for totally destroyed, heavily damaged, and partially damaged buildings for each of the three debris forecast models. The debris forecast for each of the models is presented below.

**Table 1-5: Debris Forecast from an EF3 Tornado 6 Miles Long and 300 Yards Wide**

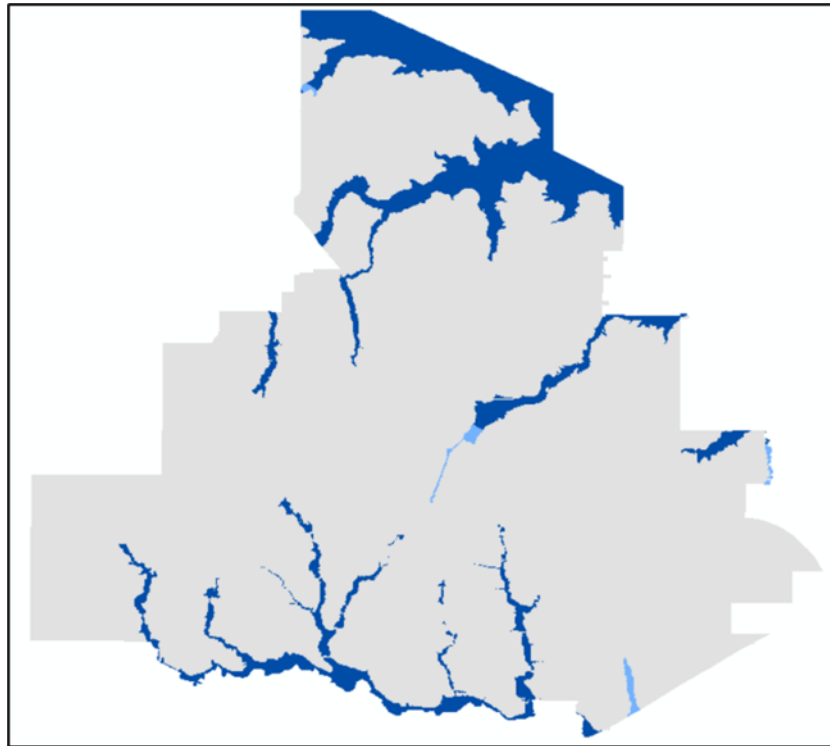
Total Residential Parcels Impacted – 1,328				
Amount of Damage	% of Buildings Impacted	# of Impacted Buildings	Average CY Per Parcel	Total CY
Partially Damaged	50%	664	546	362,544
Heavily Damaged	30%	399	1092	435,708
Totally Destroyed	20%	265	2184	578,760
<b>Total</b>	<b>100%</b>			<b>1,377,012</b>

### 1.5.2 Debris Estimate – Scenario 2

A flooding incident is the second type of debris-generating incident examined under the plan. Figure 1-3 below shows the preliminary Digital Flood Insurance Rate Map (DFIRM) from November 13, 2020. A DFIRM is a flood insurance map developed by the FEMA for use with Geographic Information Systems (GIS) technology. The dark blue zones signify areas lying within

the 100-year flood plain. The areas highlighted in light blue indicate those areas that lie within low-lying areas that are in close proximity to lakes, ponds, and other large bodies of water.

**Figure 1-3: Southlake Preliminary DFIRM Map**



Using Hazus software from FEMA, estimates were generated in **Table 1-6** below to determine the potential amounts of debris that might be generated from flooding occurring in the City based on a 1% annual chance flooding incident (100-year flood) and a 0.2% annual chance flooding incident (500-year flood). Debris quantities are stated in CY.

**Table 1-6: Flooding Incident Debris Estimates**

Debris Type	100-Year Flood	500-Year Flood
Structure (CY)	633.2	644
Foundation (CY)	756.4	768.8
Finish (CY)	5216.4	5,933.8
<b>Southlake Total (CY)</b>	<b>6,606</b>	<b>7,346.6</b>

### 1.5.3 Debris Estimate – Scenario 3

A high probability, moderate consequence incident that may impact the City may occur as a high-wind incident susceptible to severe weather, including flooding and strong winds. For this reason, the U.S. Army Corps of Engineers (USACE) hurricane debris estimation model was used to determine the type and volume of debris. While the City will not experience a direct hit from a hurricane, a Category 1 hurricane was used because it most closely resembled the type of conditions related to wind speed and precipitation and flooding the City could experience in a severe weather incident.

#### Debris Forecast Formula

The forecasted amount of residential debris in the City is based on the following formula.

$$Q=H(C)(V)(B)(S)$$

Where:

Q = Cubic yards (CY) of debris

H = Number of households in the community

C = Storm category factor (Category 1)

V = Vegetative characteristic multiplier

B = Commercial multiplier

S = Precipitation characteristic multiplier

#### Storm Category

C is the storm category factor, as shown below. It expresses debris quantity in CY per household by hurricane category and includes the house, its contents, and land foliage.

**Table 1-7: Storm Category Factor**

Hurricane Category	Value of "C" Factor
✓1	2
2	8
3	26
4	50
5	80

#### Vegetative Cover

V is the vegetation multiplier, as shown below. It acts to increase the quantity of debris by adding vegetation, including shrubbery and trees, on public rights-of-way (ROW).

- Light (1.1 multiplier) includes new home developments where more ground is visible than trees. These areas will have sparse canopy cover.

- Medium (1.3 multiplier) generally has a uniform pattern of open space and tree canopy cover. This is the most common description for vegetative cover.
- Heavy (1.5 multiplier) is found in mature neighborhoods and woodlots where the ground or houses cannot be seen due to the tree canopy cover.

**Table 1-8: Vegetative Cover Factor**

Vegetation Cover	Value of "V" Factor
Light	1.1
✓Medium	1.3
Heavy	1.5

**Commercial Multiplier**

**B** is the multiplier that takes into account areas that are not solely single-family residential but includes small retail stores, schools, apartments, shopping centers, and light industrial-manufacturing facilities. Built into this multiplier is the offsetting commercial insurance requirement for owner/operator salvage operations.

**Table 1-9: Commercial Multiplier Factor**

Commercial Density	Value of "B" Factor
Light	1
✓Medium	1.2
Heavy	1.3

**Precipitation Multiplier**

**S** is the precipitation multiplier that takes into account either a "wet" or "dry" storm incident.

**Table 1-10: Precipitation Multiplier Factor**

Precipitation Characteristic	Value of "B" Factor
None to Light	1
✓Medium to Heavy	1.2

**Scenario 3 - Debris Forecast**

A combination of relevant historical data and debris forecast calculations was used to develop the debris forecast in the high-volume debris incident.

- The goal of the debris forecast analysis for a high-wind scenario is to provide the City with a realistic amount of debris that could be generated by an incident.
- A high-wind and rain incident is a plausible scenario for a high frequency, medium consequence incident.

## Section 1

**Table 1-11: Scenario 3 - Debris Forecast Analysis**

Total Number of Households	Storm Category Multiplier	Vegetative Cover Multiplier (VCM)	Commercial Property Multiplier	Wet or Dry Storm Multiplier	Debris Estimate (CY)
9,132	2	1.3	1.2	1.3	37,039

### 1.5.4 Local Resource Needs Assessment

Local resources, also known as force account resources, are City-owned resources, including equipment and labor, that the City can use to respond to a debris-generating incident. For relatively minor incidents, the City can rely on its own resources to respond. For larger-scale incidents and disasters, the demand for resources may quickly overwhelm the resources that the City might have available. In that case, the City may look to mutual aid resources or may rely upon contracted services to provide the needed staffing, equipment, and expertise to help manage the debris. In the event of a large-scale disaster, the City must assess the local labor and determine the resources that might be needed to respond.

The matrix below provides resource requirements for tornado and severe storm debris events based on the debris estimation models.

Assumptions regarding resource requirements for earthquake and severe weather event include the following:

- Average debris collection truck capacity is 35 CY.
- Average number of trips per day for each collection truck is six.
- One monitor in place for each loading unit. Note that a Disposal Monitor will also be needed at the disposal site and DMS if activated.
- Contractor will use tandem self-loading vehicles—two containers for each loading device.
- Volume of debris that can be staged per acre is based on a 10-foot stack height: 16,117 CY/acre.
- Minimum area for a DMS is 5 acres.
- The number of operational days will vary depending on the scope of the operation.
- Number of trucks will fluctuate throughout the operation. **Table 1-12** lists the debris resource requirements over the entire operation.

**Table 1-12: Debris Resource Requirements**

Incident	Total Debris (CY)	Operational Days	DMS Acres Needed	Tandem Trucks Needed	Collection Monitors Needed
EF3 Tornado	1,377,012	180	85	36	18
Flooding (100 year)	6,606	7	5	5	3
Flooding (500 year)	7,347	7	5	5	3
Severe Weather	37,039	30	5	6	3

## Section 2

# ROLES AND RESPONSIBILITIES

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## 2.1 Administration and Logistics

Staff from the City as well as other agencies and organizations involved in debris management activities will document the personnel, equipment, and material resources used to comply with this plan. Documentation will then be used to support reimbursement from any state or federal assistance that may be requested or required.

The City will implement 12-hour staffing for debris operations as the emergency or disaster requires or as directed by the Debris Manager.

Emergency Management is responsible for the annual review of this plan. It will be the responsibility of each tasked City department and agency to update its respective portion of the plan and ensure any limitations and shortfalls are identified and documented, and work-around procedures are developed, if necessary.

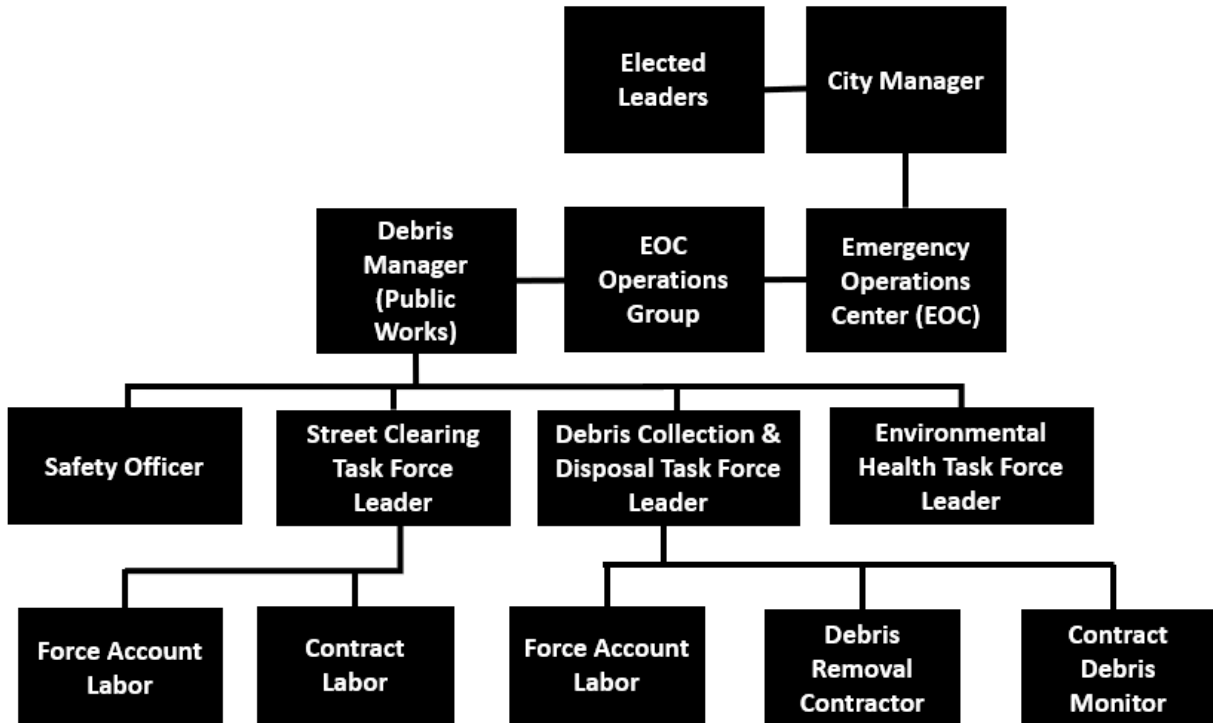
The review will consider such items as:

- Changes in mission
- Changes in concept of operations
- Changes in organization
- Changes in responsibility
- Changes in desired contracts
- Changes in pre-positioned contracts
- Changes in priorities

## 2.2 Debris Management Organization

To prevent duplication of effort following a disaster incident, roles and responsibilities of key staff and City departments, as related to debris removal and management, must be clearly defined prior to a disaster. Based on severity of the incident, the City may establish a Debris Management Operations Center (DMOC) with its own organizational structure. An organization structure for local management of debris-generating incidents, based on the Incident Command System (ICS), is depicted on Figure 2-1. The purpose of the organizational chart is to further clarify roles and facilitate local communication following a disaster.

Figure 2-1: Debris Management Operations Chart





## **2.3 Key Positions in Debris Management**

Positions that could be needed for debris management operations are described below. The level of staffing for response to a debris-generating incident will depend on the magnitude of the incident. Job Aid Checklists for key debris management positions are provided in **Appendix A**.

### **2.3.1 Debris Manager**

- Establish a DMOC.
- Activate contractors for debris clearing and debris monitoring services.
- Establish the Incident Command Structure for debris management operations.
- Coordinate with Purchasing to activate contractors for debris clearing and debris monitoring services.
- Establish priorities for debris management operations.
- Collaborate with federal, state, and other agency representatives.
- Provide updates to Emergency Management regarding debris management operations.
- Review and approve public information messages regarding debris operations.
- Coordinate with Finance in the tracking of debris management costs.
- Coordinate the demobilization of debris management operations.

### **2.3.2 Safety Officer**

- Create a safety plan.
- Ensure safety messages are developed and briefings are conducted.
- Exercise emergency authority to stop and prevent unsafe acts during debris operations.
- Revise Incident Management Plans for safety considerations.
- Investigate accidents and near misses.
- Participate in planning meetings.
- Review and approve the medical plan.

### **2.3.3 Street-Clearing Task Force Leader**

- Stage and prepare resources immediately prior to an expected incident to ensure these will be fueled and ready to activate in the event they would be needed to clear debris off jurisdiction streets.
- Oversee street-clearing immediately following a debris-generating incident.
- Coordinate local and contract resources to clear streets of debris in accordance with established objectives and priorities.

## Section 2

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- Track progress of street-clearing operations.
- Provide regular updates to the Debris Manager regarding the status of operations.
- Coordinate with the Safety Officer to ensure street-clearing operations are conducted in a safe manner.
- Ensure all hours, expenses, and equipment use are accurately documented.

### 2.3.4 Debris Collection and Disposal Task Force Leader

- Coordinate with local and contract resources to stage and ready resources immediately prior to an expected incident to ensure these will be fueled and ready to activate in the event they are needed to collect debris.
- Coordinate with the debris monitoring contractor to conduct truck certifications.
- Coordinate local and contract resources to conduct debris collection operations in accordance with established objectives and priorities.
- Coordinate with the debris monitoring contractor to conduct collection, DMS, and disposal site monitoring.
- Activate DMS locations as needed in coordination with relevant departments and agencies.
- Coordinate with Environmental Health to conduct soil sampling at DMS locations prior to and after closure of DMS locations.
- Coordinate with local labor and contractors to ensure debris is recycled or disposed of in accordance with regulatory guidelines.
- Coordinate local and contract resources to conduct special debris operations, including removals of dangerous trees, privately owned vehicles, and vessels, waterway debris, parks debris, and private property debris in accordance with FEMA authorization and guidelines.
- Track progress of debris collection, recycling, and disposal in coordination with the debris monitoring contractor.
- Provide regular updates to the Debris Manager regarding status of operations.
- Coordinate with the Safety Officer to ensure debris collection and disposal operations are conducted in a safe manner.
- Ensure all hours, expenses, and equipment use are accurately documented.

### 2.3.5 Environmental Health Task Force Leader

- Liaise with regional, state, and federal environmental agencies and contractors to monitor environmental impacts of debris management operations, including ground/surface water, air, soil, and asbestos monitoring.
- Coordinate with the Debris Collection and Disposal Task Force Leader, or designee, to conduct soil sampling at DMS locations prior to and after closure of DMS locations.
- Conduct permitting of DMS locations.

- Track progress of environmental monitoring and testing operations and document results.
- Provide regular updates to the Debris Manager regarding status of environmental monitoring operations.
- Coordinate with the Safety Officer to ensure environmental monitoring operations are conducted in a safe manner.
- Ensure all hours, expenses, and equipment use are accurately documented.

### **2.3.6 Debris Clearing Task Force**

- Coordinate through the Street-Clearing Task Force Leader to divide into teams and clear streets of debris in accordance with established objectives and priorities.
- Report any hazardous conditions such as downed power lines, hazardous materials (HAZMAT) spills, and natural gas leaks to the proper authorities as well as the Street-Clearing Division Supervisor.
- Track progress of the Task Force in street-clearing operations.
- Provide updates as required to the Street-Clearing Task Force Leader regarding status and progress of the Task Force.
- Obey health and safety policy and follow health and safety guidance in conducting street-clearing operations.
- Ensure all hours, expenses, and equipment use are accurately documented.

### **2.3.7 Debris Removal Task Force**

- Coordinate through the Debris Collection and Disposal Task Force Leader to divide into teams consisting of debris removal and debris monitors to collect debris and deliver it to the appropriate location for reduction, recycling, or disposal.
- Report any hazardous conditions such as downed power lines, HAZMAT spills, and natural gas leaks to the proper authorities as well as the Debris Collection and Disposal Task Force Leader.
- Track progress of the Task Force in debris removal, reduction, recycling, and disposal operations.
- Provide updates as required to the Debris Collection and Disposal Task Force Leader regarding status and progress of the Task Force.
- Obey health and safety policy and follow health and safety guidance in conducting debris removal, reduction, and disposal operations.
- Ensure all hours, expenses, and equipment use are accurately documented.

### 2.4 Primary Departments

The unique roles of City offices and departments associated with managing the debris clean-up process are summarized below.

#### 2.4.1 City Manager's Office

- Responsible for day-to-day management of the City.
- Coordinate response and recovery activities through the Emergency Operations Center (EOC).
- Provide the Mayor and City Council with information regarding the progress of the debris removal effort.
- Approve emergency purchases up to \$50,000 necessary for response and recovery.
- Approve activation of standby contracts for emergency debris clearance, collection, and monitoring.
- Ensure consistent and accurate public messages are coordinated through Marketing and Communications and other departments with a role in response and recovery.

#### 2.4.2 Public Works Department

- Serve as the lead City department for debris management operations.
- Assign an individual to serve as the Debris Manager.
- Assign a staff member to represent Public Works in the EOC.
- Pre-stage equipment to prevent damage and to ensure its readiness in the event of a known hazard such as a severe storm.
- Coordinate with Emergency Management to activate the DDMP.
- Prioritize streets for clearing debris.
- Implement debris clearing activities, coordinate department personnel, and coordinate with personnel from supporting departments and agencies with a role in debris operations.
- Conduct initial baseline sampling at DMS locations as well as sampling after use of the property as a DMS to ensure the property is restored to its pre-DMS condition.
- Coordinate with the North Central Texas Public Works Emergency Response Team (PWERT) and other local jurisdictions in the activation of Memorandums of Understanding (MOUs) for additional Public Works resources as needed.
- Pick-up dead animals from City streets and properties.

#### 2.4.3 Emergency Management

- Activate the EOC and manage the EOC throughout response and recovery.

- Request needed resources through mutual aid agreements or the State of Texas Assistance Request (STAR) process.
- Collaborate with Gateway Church to organize and utilize volunteer agencies to aid residents in the clearing of debris from their properties.
- Review and update the plan.
- Coordinate mitigation and preparedness activities.
- Coordinate training and exercises.
- Conduct after action briefings and develop after action reports and improvement plans following exercises and real incidents.

## 2.5 Interdepartmental Coordination

With the Public Works Department acting as the lead department in the clean-up effort, various additional departments within the City will have specific duties that will assist in the recovery effort. An account of the primary roles and responsibilities for each department has been summarized in the following section.

### 2.5.1 City Attorney

- Review debris management contracts prior to signature by the City Council.
- Assist the City Secretary's Office in developing the Declaration of Disaster in response to a disaster affecting the City.
- Coordinate with Code Enforcement to enforce existing nuisance abatement laws.

### 2.5.2 City Secretary's Office

- Prepare necessary declaration of disaster documents for signature by the Mayor and City Council.
- Provide administrative support to the Mayor and City Council.

### 2.5.3 Community Services

- Assist in emergency roadway clearing activities through use of Community Services equipment, staff, and contractors (e.g., tree trimming companies) as needed.
- Provide logistics support to the EOC.
- Provide parks to serve as potential DMS locations.
- Oversee the clearance of debris from City parks.
- Provide City facilities as backup shelters. There are currently no City facilities designated as primary shelters.

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### 2.5.4 Finance

- Establish an account code for tracking disaster response and recovery expenses.
- Coordinate with City departments to ensure disaster response/recovery hours, expenses, and equipment use are tracked accurately.
- Coordinate with FEMA, the Texas Department of Public Safety (DPS) Coordinator, Emergency Management, and Public Works, regarding Project Worksheet (PW) development.
- Manage any property claims resulting from debris operations.
- Procure needed goods needed for response and recovery in accordance with the City's emergency purchasing policy.
- Coordinate with Public Works to contract with needed vendor services.
- Ensure that purchases and contracts are conducted in accordance with state and federal guidelines.

### 2.5.5 Fire Department

- Provide preliminary damage and blocked roads information to dispatch.
- Report downed power lines and/or damaged gas lines to utility companies through dispatch.
- Conduct fire suppression, emergency medical services, and public fire safety duties.
- Contain hazardous materials spills and coordinate with responsible party or contractor for clean-up. Request local mutual aid HAZMAT Teams for support as needed.
- Direct search and rescue operations in coordination with local and state mutual aid resources.

### 2.5.6 Human Resources

- Provide logistics support in the EOC.
- Assist in capturing time and attendance of City staff responding to a disaster.
- Oversee employee safety and training. Sponsor the employee safety committee.
- Facilitate internal communications to staff.
- Manage workers compensation claims.

### 2.5.7 Marketing and Communications

- Develop public information messages related to debris operations.
- Update the City website with current information regarding debris management operations.
- Update and monitor social media (Facebook, Twitter, and Next Door) posts regarding debris operations.
- Address inquiries from the news media.

- Conduct news briefings as needed.
- Address rumors and misinformation.

### **2.5.8 Mayor and City Council**

- Manage all legislative and governing activities of the City.
- Approve and sign contracts and various documents throughout the debris removal operation.
- Communicate with constituents regarding the status of debris operations and address concerns.

### **2.5.9 Planning and Development**

- Provide logistics support through the EOC.
- Coordinate with the Fire Marshall to conduct post-disaster safety inspections on homes and commercial structures.
- Coordinate with the Building Officials Association of Texas (BOAT) as needed for support in conducting structural and safety assessments.
- Reassess homes and commercial structures to ensure repairs are made according to standards.
- Abate nuisances in accordance with code enforcement ordinances.

### **2.5.10 Office of Performance Excellence**

- Provide GIS mapping services to support debris management operations, including:
  - Jurisdictional boundaries
  - Locations of hazards
  - Location of Public Works assets
  - Status of debris operations
  - Other information as needed

### **2.5.11 Police Department**

- Provide protection of public and private property.
- Provide situational awareness to the EOC.
- Coordinate with the Tarrant County Medical Examiner's Office in death investigations.
- Establish perimeter security and coordinate with other law enforcement agencies in the investigation of debris-generating incidents caused by a criminal and/or terrorist act.
- Enforce any curfews enacted by City Council.
- Take enforcement actions regarding illegal dumping as a result of the debris-generating incident.

## **2.6 County Offices**

### **2.6.1 Denton County and Tarrant County Offices of Emergency Management**

- Establish and maintain the County EOC to serve affected jurisdictions.
- Coordinate the utilization of County resources to meet local resource requests.
- Forward resource requests that the County is unable to fill to the regional Disaster District Committee (DDC).

### **2.6.2 Denton County and Tarrant County Commissioner Offices**

- Clear and repair county roads.
- Address needs and concerns of precinct constituents.

### **2.6.3 Tarrant County Office of the Medical Examiner**

- Determine the cause and manner of death for sudden and unexpected deaths occurring within Tarrant and Denton Counties.

### **2.6.4 Denton County and Tarrant County Public Health Departments**

- Monitor the health status of the community.
- Determine if debris poses a threat to public health and safety.
- Issue guidance to the public regarding possible public health threats.

## **2.7 State Agencies**

### **2.7.1 Texas Animal Health Commission (TAHC)**

- Assist the City in the disposition of dead animals.

### **2.7.2 Texas Commission on Environmental Quality (TCEQ)**

- Oversee and approve DMS selection and closure.
- Provide guidance in managing and disposing of debris from a disaster.
- Provide regulatory assistance to local governments and other entities in debris management operations relating to compliance with environmental laws to enable them to be eligible for FEMA reimbursement.



### **2.7.3 Texas Department of State Health Services (DSHS) Region 2/3**

- Monitor the health status of the community.
- Monitor and coordinate environmental health activities.
- Determine if debris poses a public health threat.
- Issue guidance to the public regarding public health threats and provide assistance to affected communities as needed.
- The DSHS Asbestos Program is tasked with regulating and enforcing asbestos regulations in the State of Texas.

### **2.7.4 2-1-1 Texas, Texas Health and Human Services Commission (HHSC)**

- Serve as a resource to the City to help provide information to the public regarding debris management operations.

### **2.7.5 Texas Division of Emergency Management (TDEM)**

- Coordinate resource requests for state assets, i.e., the National Guard or other State agencies or from neighboring Disaster Districts.

### **2.7.6 Texas General Land Office (GLO)**

- Provide assistance in the removal of derelict vessels and coordinate debris removal from publicly owned beaches and State-owned submerged lands.
- Manage recovery grants through the U.S. Department of Housing and Urban Development (HUD).

### **2.7.7 Texas Department of Transportation (TxDOT)**

- Conduct emergency road clearing activities immediately after a natural disaster and the “first pass” of debris removal on all state and federal roads.

### **2.7.8 Texas Historical Commission (THC)**

- Coordinates post-event disaster management site application to ensure compliance with Section 106 of the National Historic Preservation Act as administered through Title 36 of the Code of Federal Regulations and compliance with the Antiquities Code of Texas and its implementing regulations.

## **2.8 Federal Agencies**

### **2.8.1 Federal Emergency Management Agency (FEMA)**

- Provide guidance to the City regarding debris eligibility and the FEMA reimbursement process.
- Develop PWs for the City’s debris clean-up operations.
- Oversee any private property clean-up, should this be declared.

### **2.8.2 Federal Highway Administration (FHWA)**

- Fund debris clearance and removal on federal aid highways through the Emergency Relief (ER) Program for an incident not declared a major disaster or emergency by the President under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, or an incident declared a major disaster or emergency by the President under that Act if the debris removal is not eligible for assistance under Section 403, 407, or 502 of that Act.

### **2.8.3 Natural Resources Conservation Service (NRCS)**

- Provide assistance through the Emergency Watershed Protection (EWP) Program in debris clean-up for runoff retardation or soil erosion prevention that causes impairment in a watershed and is an imminent threat to life or property.

### **2.8.4 Office of Inspector General (OIG)**

- Conduct an aggressive and ongoing audit effort designed to ensure that disaster relief funds are spent appropriately while identifying fraud, waste, and abuse as early as possible.

### **2.8.5 U.S. Army Corps of Engineers (USACE)**

- Assist local jurisdictions in debris removal operations following catastrophic incidents as well as provide assistance in assessing and restoring critical infrastructure.

## **2.9 Private Enterprise**

### **2.9.1 Debris Hauling Firm**

- Clear and remove debris from jurisdiction roadways and waterways to make them passable immediately following a declared disaster.
- Conduct debris removal from the ROW.
- Decommission, demolish, and dispose of eligible non-regulated asbestos-containing material (non-RACM) structures on private property.

- Manage and operate DMS locations.
- Conduct debris reduction.
- Haul-out reduced materials to recycling/end-use facilities.
- Remove hazardous leaning trees and hanging limbs.
- Removal of hazardous stumps.
- Remove white goods debris from the ROW.
- Coordinate the removal of household hazardous waste (HHW) from the ROW.
- Coordinate derelict vehicle removal and abandoned vehicle removal.
- Remove animal carcasses from areas designated by the City.
- Communicate status of operations and supply chains as well as challenges and timelines to local officials.

### **2.9.2 Republic Services (Franchised Trash Hauler and Recycling)**

- Conduct collection, disposal, and processing of acceptable waste, including but not limited to residential waste, commercial waste, industrial waste, construction debris, and city waste.
- Conduct curbside collection of recyclable materials, transport the recyclable materials to a processing site, and maintain established buyers or markets for the recyclables.
- Provide one yearly HHW collection event in the City.
- Provide assistance, at the City's request, to residents in the disposal of storm debris. City and Republic Services will negotiate the fees to be paid for the service.
- Conduct franchised trash collection and recycling services in coordination with the debris hauling firm.

### **2.9.3 Debris Monitoring Firm**

- Perform truck certifications.
- Conduct DMS monitoring.
- Conduct ROW collection monitoring.
- Conduct disposal site monitoring.
- Support monitoring and documentation of hazardous tree removal and specialized debris removal programs such as waterways debris removal and private property debris removal.

## **2.10 Nonprofit Organizations**

- Assist residents unable to bring debris to the ROW.
- Assist the City in communicating instructions to populations with communication barriers.

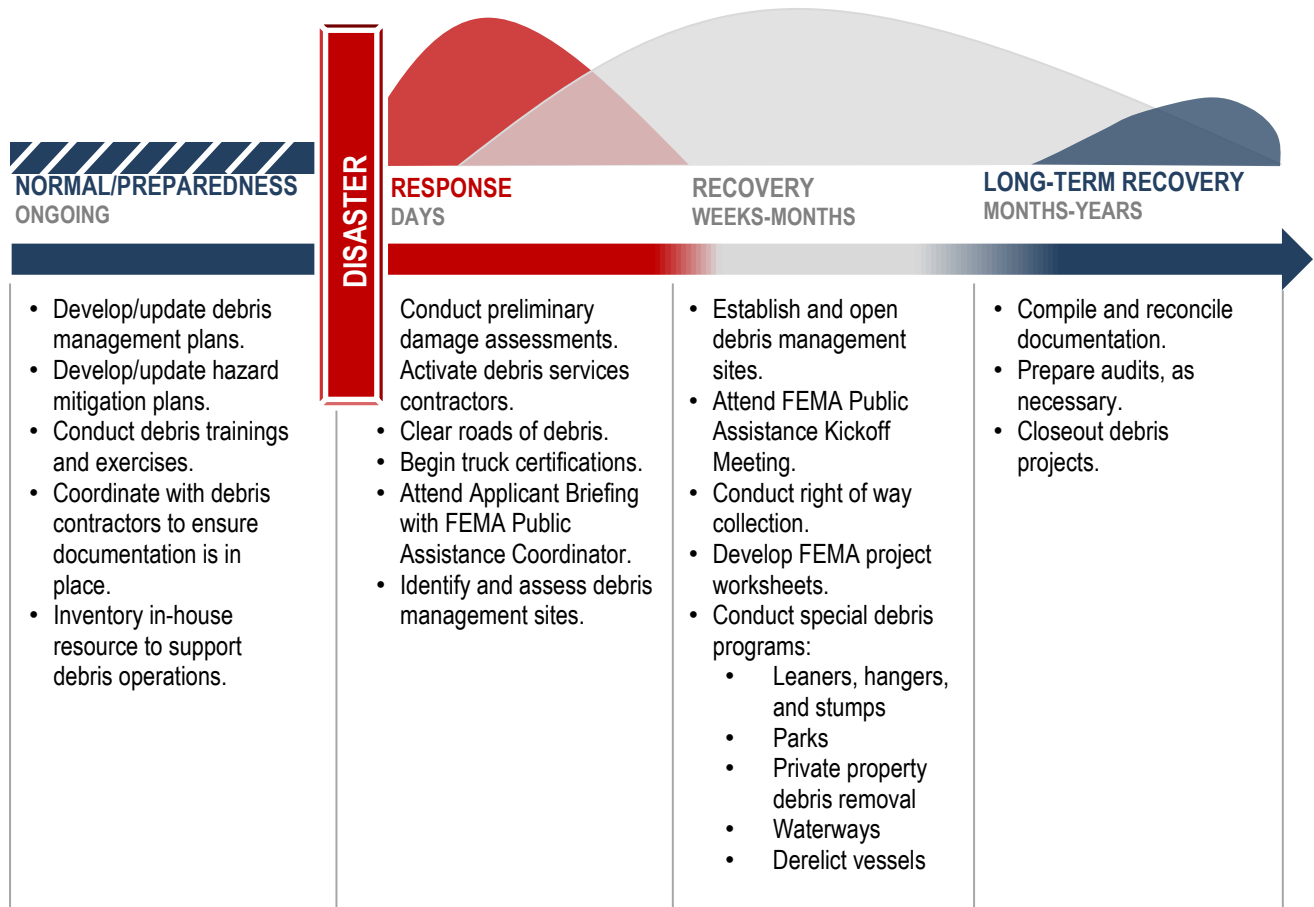


# Section 3

## DEBRIS COLLECTION AND REMOVAL PLAN

This section provides guidance required for all phases of a debris-generating incident. For the purposes of this plan, four phases are discussed: Normal Operations, Pre-Incident Preparation, Post-Incident Response, and Post-Incident Recovery. Checklists for disaster debris management operations can be found in **Appendix B**. Figure 3.1 summarizes the phases of disaster debris management operations. The phases are described in detail in this section.

**Figure 3-1: Disaster Recovery Timeline**



### 3.1 Normal Operations

Normal Operations is the period of time when the City is not in any serious threat of a disaster incident. Tornadoes and severe thunderstorms can occur at any time but are most likely to take place throughout the spring and summer months in the southern portions of the United States.

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However, the City’s geographic location is in an area of the country commonly known as “Tornado Alley” due to the high number of storms that occur in this region year-round. Therefore, the City may experience tornadoes or other debris-generating incidents throughout the year, so it is imperative to maintain a constant state of preparedness throughout Normal Operations by reviewing and updating the plan annually.

The Normal Operations phase is the ideal time for the City to establish and/or review pre-positioned contracts with its monitoring firm and debris removal contractor(s) and review current local ordinances and their historical impact on debris removal operations. The Normal Operations period is also the ideal time for Emergency Management and lead City departments in debris recovery efforts to re-evaluate the roles and responsibilities of each department and other involved outside agencies. The purpose of this evaluation is to ensure that all impacted departments, municipalities, and external agencies maintain the capacity to fulfill their obligations in a timely and effective manner should a disaster strike the City. Once roles and responsibilities have been re-evaluated, a review and update of the plan should be conducted annually prior to severe weather season. Also, prior to severe weather season, a pre-season kickoff meeting should be held between the City and their pre-positioned monitoring firm and debris removal contractors. The Normal Operations Checklist is also provided in **Appendix B**.

### 3.1.1 Normal Operations Checklist

- Update contact lists.
- Evaluate DMS locations.
- Review road list and road maps.
- Establish and maintain pre-positioned contracts.
- Review State and FEMA guidance.

#### **Update Contact Lists**

Contact lists for staff should be updated periodically to reflect changes in personnel or contact information.

#### **Evaluate DMS Locations**

Locations identified to serve as DMS following a debris-generating incident should be re-evaluated annually to ensure they remain viable candidates for DMS operations. Likewise, additional DMS locations may be identified as the development and landscape of the City’s progress over time. Both the TCEQ and the THC must approve the temporary storage of debris outside of a certified or properly licensed landfill. The City must submit a Request for Approval of Temporary Debris Management Site form to the TCEQ regional office, and a Disposal Site Evaluation and Registry form to the THC, for each site they plan to operate as a DMS prior to conducting DMS operations.

#### **Review Road List and Road Maps**

Changes or updates relating to road segments and applicable maintenance responsibility among local, state, and federal agencies are critical for reimbursement through the PA Grant Program and

the Federal Highway Administration-Emergency Relief (FHWA-ER) Program.<sup>8</sup> It is critical that the City review and update road lists and maps annually. Updated and accurate road lists and maps will assist in documenting debris removal operations and thereby assist the City during the reimbursement process.

### **Establish and Maintain Pre-Positioned Contracts**

During times of normalcy, the City will establish and maintain pre-positioned contracts for debris monitoring and debris removal services. The procurement of such services will be compliant with the City's procurement practices and the procurement competition requirements specified in the Code of Federal Regulations – Title 44 Emergency Management and Assistance (44 CFR) Part 13.36. For additional guidelines regarding contracting, see **Appendix C**. **Appendix D** consists of a sample scope of work to aid in the evaluation and selection of debris removal contractors. See **Appendix E** for a list of contractors that have been pre-positioned by the City.

### **Review State and FEMA Guidance**

Rules and regulations dictating operational procedures change periodically; therefore, the information in the plan should be updated annually to reflect such changes.

## **3.2 Pre-Incident Preparation**

The City should begin pre-incident preparations when a potential debris-generating hazard is moving toward the City. However, because of the relatively short notice that most incidents have that could affect the City, the opportunity to make pre-incident preparations is limited. If it is feasible to employ pre-incident preparations, key City personnel and representatives of involved outside agencies as well as their staffs should be put on alert and maintain awareness that they may be required to work extended hours in adverse conditions.

The availability of pre-selected/pre-approved DMS locations will be evaluated by Emergency Management. A list of potential DMS locations can be found in **Appendix F**. Alternate locations will be considered by prioritizing potential alternate sites if one or more pre-approved sites are not available. A sample memorandum of understanding for use in establishing agreements with private landowners for use of their property for DMS can be found in **Appendix G**. City representatives should place the pre-positioned monitoring firm and debris removal contractors on standby.

City representatives should be familiar with 2 CFR Super Circular as part of the federal contracting requirements to receive federal awards: <https://www.govinfo.gov/app/details/CFR-2014-title2-vol1/CFR-2014-title2-vol1-part200>.

### **3.2.1 Pre-Incident Checklist**

- Download most recent road list and relevant documents to a portable storage device.
- Alert key personnel and place monitoring firm and debris removal contractors on standby.
- Review plan with key personnel.

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<sup>8</sup> FHWA Special Federal Aid Funding, <https://www.fhwa.dot.gov/programadmin/erelief.cfm>

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- Issue pre-incident media press releases.

The checklist performed during pre-incident preparation is critical in assembling a coordinated response. The checklist is a valuable tool to ensure that proper steps are taken in a time of extreme duress. The Pre-Incident Checklist is also provided in **Appendix B**.

### **Download Most Recent Road List and Relevant Documents to a Portable Storage Device**

The Public Works Department will acquire and download to a portable storage device the most recent street list and maps of the City prior to the debris-generating incident. Many of the computers and servers that store this information may be unavailable immediately following an incident. Having this information on-hand ensures that debris collection operates properly and commences in a timely manner. It is critical that the City provides updates of the road list to the debris monitoring firm as they become available.

Copies of the street list and maps should be stored with the Public Works Department in a safe location outside the projected path of the debris-generating incident.

### **Alert Key Personnel and Place Monitoring Firm and Debris Removal Contractors on Standby**

Prior to a debris-generating incident, Emergency Management should contact key City personnel to inform them of information needed to begin the response and recovery process.

The debris monitoring firm and debris removal contractors should be put on alert that their contracts may be activated. (See **Appendix E** for contact information.) Discussions with the debris monitoring firm and debris removal contractors should address the following key issues:

- Availability and amount of assets that will be dedicated to debris removal operations;
- Estimated time of mobilization;
- Exchange of mobile contact information; and
- Identification of staging area(s) for truck certification.

### **Review Plan with Key Personnel**

Once an initial meeting is scheduled with key contacts, the managers of debris operations, the debris monitoring firm, and debris removal contractors should review the DDMP. During the initial meeting, the Health and Safety Strategy located in **Appendix H** of this plan should also be reviewed by the City and modified/appended, as necessary.

## **3.2.2 Public Information Pre-Incident**

The managers of debris operations and the Public Information Officer, through the EOC, will disseminate a message preparing residents for the potential debris removal operation. The message should assure the public that the City is prepared and has a plan in place to immediately respond to an incident. The message should also include information on City office closure times/dates (this should include information regarding garbage collection and City facilities). In addition, the



City should provide information on proper set-out procedures and estimates on when the clean-up process will begin. A draft message for this scenario is included in **Appendix I**.

### 3.3 Post-Incident Response

Immediately following the incident, roadways must be cleared of scattered debris, leaning trees, and other obstructions in roadways for emergency response vehicles. This specific operation is reimbursable by FEMA on a time and materials basis. It is critical that all types of equipment and the amount of time the equipment is used are documented with detail and accuracy. (Please note that the reimbursement criteria and duration for time and materials work is subject to change following a disaster.)

During this phase, the Public Works Department will initiate emergency road clearance activities. If necessary, the City may request additional resources for emergency road clearance operations from the debris removal contractor. Road clearance priorities are pre-established to allow access to critical public facilities such as fire stations, police stations, hospitals, shelters, emergency supply centers, and other critical facilities. Concurrent to emergency push operations, the City's debris removal contractors should perform necessary preparation work to open DMS locations.

#### 3.3.1 Emergency Road Clearance Priorities

Certain roads will require priority for emergency road clearance operations. Priority roads are deemed as such based on many considerations, including size, proximity to adjacent citizen populations, Police and Fire Department locations, and ingress/egress capabilities for the community. The list of priority roads is within **Appendix J**.

### 3.4 Post-Incident Response Checklist

The following Response Checklist is critical in assembling a coordinated response. The checklist is a valuable tool to ensure that proper steps are taken in a time of extreme duress. The Response Checklist is also provided in **Appendix B**.

- Begin emergency roadway debris clearance.
- Conduct damage assessments.
- Establish a DMOC.
- Activate monitoring firm and debris removal contractors.
- Begin truck certification.
- Prepare DMS based on concentration of debris.
- Conduct meetings/briefings with key personnel.
- Review debris volume and collection cost assessment.
- Request contact information and meeting with FEMA Public Assistance Program Delivery Manager (PA PDMG).

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- Issue media press release.

### 3.4.1 Conduct Damage Assessment

Damage assessments are necessary to determine the extent and the location of the debris. Windshield surveys of affected the City should be taken and used to communicate critically damaged areas to the EOC. If possible, additional aerial surveys should be conducted by helicopter or drone to obtain an aerial view of damaged areas within the City. Often, aerial surveys are available through debris removal contractors independently surveying affected areas to determine asset levels and configuration.

### 3.4.2 Establish a Debris Management Operations Center

To effectively manage debris operations, a DMOC may be established. From the DMOC, key strategies and functions of debris management operations will be coordinated in collaboration with other City departments with a role in debris management as well as the debris monitoring firm and debris hauler. In addition, the DMOC will also be the hub for information regarding the status of debris management operations with information flowing in from field operations staff, processed in the DMOC, and then used to provide situational awareness regarding debris management operations to the EOC. The Public Works Department will provide the necessary staffing to operate the DMOC with support from other City departments as needed. A City staff member will be selected to serve as the Debris Manager to lead City debris operations and direct DMOC activities. The responsibilities of the Debris Manager are listed in Section 2.3.1 of this plan.

In addition to operating the DMOC, the City will assign one or more Public Works Liaisons to report to and coordinate with the EOC. The role of the Public Works Liaison will be to relay status updates and facilitate resource requests for debris management operations.

### 3.4.3 Activate Monitoring Firm and Debris Removal Contractors

The Debris Manager, working in coordination with Emergency Management and City leadership, will utilize the damage assessments to determine whether to activate the debris monitoring firm and debris removal contractors. Once the debris monitoring firm and debris removal contractors are activated, each contractor should review an updated street list, debris collection zone map found in **Appendix K**, and the Health and Safety Strategy found in **Appendix H**. The debris monitoring firm and debris removal contractors should begin logistical coordination and equipment ramp-up immediately upon receiving a Notice to Proceed.

#### Monitoring Function

Upon activation, the debris monitoring firm deploys staff to support truck certification, collection, and disposal monitoring functions. The debris monitoring firm will orient employees with operational procedures and refresh staff with the field training program on current debris removal eligibility, FEMA requirements, City debris removal contract requirements, and safety procedures. Collection monitors must carefully document debris collection information to demonstrate eligibility and ensure proper debris removal contractor payments and FEMA reimbursement. The documentation should include:

- Applicant name
- Location of debris, including full address and zone
- Time and date of collection
- Name of contractor
- Name and unique employee monitor number
- Truck certification number
- Truck capacity (disposal site monitor will fill out load call [percentage] information)
- Debris classification
- Disaster declaration number

### **Debris Removal Contractor Function**

Upon activation, the debris removal contractor mobilizes staff and equipment to the incident location. Equipment will be certified as required by the debris monitoring firm. Regarding DMS locations, site preparation will begin, including logistical setup and tower construction. The contractor will orient subcontractors with operational procedures and refresh staff with current debris removal eligibility, FEMA requirements, City debris removal contract requirements, and safety procedures.

### **3.4.4 Begin Emergency Roadway Debris Clearance**

The City will commence with road clearance or “cut and toss” activities. These operations should first focus on major arteries leading to storm shelters, hospitals, fire stations, police stations, supply points, and other critical locations throughout the City. A list of priority roads for the City can be found in **Appendix J**. A list of force account equipment that can be used for road clearing and debris collections can be found in **Appendix L**.

### **3.4.5 Begin Truck Certification**

Truck certification is the most important function in initiating a debris removal operation. Accuracy and documentation of all measurements is critical. All debris removal trucks hauling debris under volumetric contracts with the City must have their capacity and dimensions measured, photographed, and documented on a truck certification form. The debris monitoring contractor can conduct truck certification services. See **Appendix M** for truck certification and other documents that might be used in debris operations. Each debris removal truck will be assigned a unique number for debris tracking and invoice reconciliation purposes. Truck certifications should contain:

- Unique truck number
- Driver name
- Driver phone number
- License number, state issued, and expiration

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- Tag number, state issued, and expiration
- Vehicle measurements
- Pictures of the vehicle

### 3.4.6 Prepare Debris Management Sites Based on Concentration of Debris

The Debris Manager, the debris monitoring firm, and debris removal contractors will meet to discuss the opening and operation of pre-identified DMS locations. Before DMS preparation begins, the City will obtain DMS approval from TCEQ. The following items should be taken into consideration when opening and operating DMS:

#### Qualification Criteria

- Current availability
- Duration of availability
- Ingress/egress
- Concentration of debris relative to each site
- Geographic location within the City

Potential DMS locations have been identified and are listed in **Appendix F** of this plan.

#### Reduction Method

- **Chipping and Grinding** – Using this method, vegetative debris is chipped or ground and typically results in a reduction ratio of 4:1. The leftover mulch is either hauled to a final disposal facility or recycled. Chipping and grinding are the City’s first choice for debris reduction.
- **Incineration** – The open burning of vegetative debris requires approval from the Fire Department and the TCEQ due to air quality concerns. The burning of vegetative debris typically results in a reduction ratio of 20:1. The leftover ash may be hauled to a final disposal facility or be incorporated in a land application.
- **Crushing** – The crushing of vegetative debris is the least effective reduction method and results in a reduction ratio of 2:1. Crushing is an appropriate reduction method for C&D debris that cannot be recycled.

#### Recycling of Debris

Common recyclable materials that are a result of a debris-generating incident include wood waste, metals, and concrete. The following are potential uses for each of the materials:

- **Wood Waste** – Vegetative debris that is reduced through chipping or grinding results in leftover mulch. The remaining mulch can be used for agricultural purposes or fuel for industrial heating. For the mulch to be viable in agricultural purposes, the end user typically has a size requirement and requests mulch is as clean as possible of plastics and dirt.

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## DEBRIS COLLECTION AND REMOVAL PLAN

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- **Metals** – Metal debris such as white goods, aluminum screened porches, etc. that may result from a debris-generating incident can be recycled. Certain metals such as aluminum and copper are highly valuable to scrap metal dealers.
- **Concrete** – Concrete, asphalt, and other masonry products that may become debris as a result of a debris-generating incident can be crushed and potentially used for road construction projects or as trench backfill.

There is a multitude of information available regarding the recycling and selling of solid waste debris. An example of such resource is the Southern Waste Information eXchange, Inc. website (<http://www.wastexchange.org>), which is a nonprofit clearinghouse with information regarding the recycling of solid waste. The TCEQ also maintains information on resources for recycling on its website at <https://www.tceq.texas.gov/p2/recycle>. **Appendix E** contains a list of possible end users for recyclable debris.

### DMS Preparation

After a review of the availability and suitability of DMS, the debris removal contractor can begin site preparation. As part of the preparation, baseline data should be gathered from the site to document the state of the land before debris is deposited. The following action items are recommended to compile baseline information:

- **Photograph the Site** – Digital photos should be taken to capture the state of the site before debris reduction activities begin. Photos should be updated periodically throughout the project to document the progression of the site.
- **Record Physical Features** – Records should be kept detailing the physical layout and features of the site. Items such as existing structures, fences, landscaping, etc., should be documented in detail.
- **Historical Evaluation** – The past use of the site area should be researched and documented. Issues relating to historical or archeological significance of the site should be cleared with the state historical preservation agency.
- **Sample Soil and Water** – If possible and deemed necessary, soil and groundwater samples will be taken before debris reduction activities commence. Samples will help ensure the site is returned to its original state. Typically, soil and groundwater samples should be analyzed for total Resource Conservation and Recovery Act (RCRA) metals, volatile organic compounds, and semi-volatile organic compounds using approved Environmental Protection Agency (EPA) methods.

The Debris Manager and monitoring firm will oversee the debris removal contractor's activities to ensure that they follow their contractual obligations, comply with environmental standards, and act in the best interest of the City and its residents. TCEQ will be contacted to provide final approval under an emergency declaration for the DMS locations.

### Disposal Monitoring

The primary function of the debris monitoring firm regarding disposal monitoring is to document the disposal of disaster debris at approved DMS and final disposal locations. Disposal Monitors perform quality assurance/quality control (QA/QC) checks on all load tickets and haul-out tickets

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to ensure that information captured by collection monitors is complete. This QA/QC includes but is not limited to:

- Inspection of truck placards for authenticity and signs of tampering;
- Verification that placard information is documented properly; and
- Verification that all required fields on the load ticket have been completed.

Afterward, the Disposal Monitor will document the amount of debris collected by making a judgment call (or load call) on vehicle fullness (typically on a percentage basis). The percentage documented for each debris removal vehicle is later applied to the calculated cubic yard capacity of the vehicle to determine the amount of debris collected. The Disposal Monitor's responsibilities include but are not limited to:

- Completing and physically controlling load tickets;
- Ensuring debris removal trucks are accurately credited for their loads;
- Ensuring trucks are not artificially loaded;
- Ensuring hazardous waste is not mixed in with loads;
- Ensuring all debris is removed from the debris removal trucks before exiting the DMS or final disposal site; and
- Ensuring only debris specified within the City's scope of work is collected.

In addition to the responsibilities listed above, final disposal site monitors are also tasked with the following:

- Ensuring all debris is disposed at a properly permitted landfill; and
- Matching landfill receipts and/or scale house records to haul-out tickets.

An inspection tower must be provided so the Disposal Monitor can see down in the truck beds to conduct load calls. A scissor jack made be used for this purpose, or an inspection tower can be constructed. The inspection platform of the tower must be constructed at a minimum height of 10 feet from surrounding grade to finish floor level, have a minimum 8 feet by 8 feet of usable floor area, be covered by a roof with 2 feet overhangs on all sides, and be provided with appropriate railings and a stairway. The platform must be enclosed, starting from platform floor level and extending up 4 feet on all four sides. Provision of an inspection tower can be delegated to a contract debris hauler firm if one is procured by the City. The dimensions listed above can also be found in the Sample Debris Hauler Request for Proposals found in **Appendix D**.

### 3.4.7 Conduct Meetings/Briefings with Key Personnel

Coordination meetings and briefings with key personnel should be conducted to update the status of the road clearance efforts, DMS openings, contractor asset ramp-up, and pertinent public information for press releases.

Daily meetings should be held each morning in the City at a location determined by the City and include key personnel from the City, monitoring firm, and debris removal contractors. The purpose of daily meetings is to focus on daily objectives and include a discussion of operational progress,

safety, and best practices moving forward. During the meeting, the City will also review real-time statistics and completion maps that reflect operations through the end of the previous day.

### 3.4.8 Review Debris Volume and Collection Cost Assessment

The City's Debris Manager, monitoring firm, and debris removal contractors will meet to review the debris volume and collection cost assessment. The topics of discussion in this meeting may include but are not limited to:

- Amount of debris generated (total CYs);
- Type of debris generated (vegetative, C&D, or other miscellaneous debris);
- Number and estimated date of arrival for assets (trucks, loaders, monitoring personnel);
- Estimated number of DMS locations necessary;
- Preliminary scope of debris removal efforts; and
- Estimated cost of the debris removal efforts.

Following this meeting, the City and/or monitoring firm will begin to collect required documentation for the development of FEMA PWs.

### 3.4.9 Request Contact Information and Meeting with FEMA Public Assistance Program Delivery Manager

Emergency Management should immediately request, through TDEM, a meeting with the designated FEMA PA PDMG for the disaster. During this meeting, the City will:

- Summarize the City's debris removal operations to date;
- Review debris and cost estimates for the City;
- Review any Disaster-Specific Guidance (DSG) documents issued by FEMA;
- Examine the City's debris removal plan;
- Provide contact information for all monitoring firm and debris removal contractors and key personnel; and
- Determine additional information the PDMG will need to generate PWs for the City. For FEMA to generate a Category A, debris removal, and debris monitoring PW, it will require the following information:
  - Copy of the debris removal contractor contract(s);
  - Copy of the debris monitoring firm contract(s);
  - Information on the procurement process of the debris removal and monitoring contracts;
  - Address (if available) and global positioning system (GPS) coordinates for all DMS;
  - Debris volume and costs estimates (using USACE model and damage assessment reports);
  - Monitoring cost estimate (based on budgeted labor hours); and

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- Brief debris removal plan overview.

### 3.4.10 Public Information Post-Incident

A press release will be issued to various media sources and posted to the City’s website as well as the City’s social media sites within the first 3 days following the debris-generating incident. The content of the press release will be to reassure and comfort the public that the City is responding to the incident and has activated the debris monitoring firm and debris removal contractor to begin debris removal activities. Sample public information messages are located in **Appendix I**.

## 3.5 Post-Incident Recovery

For the purpose of debris management, the post-incident recovery phase is marked by the debris removal contractor collecting and reducing debris from the public ROW.

Concurrent to the commencement of ROW debris removal operations, the City should evaluate the need for contract debris removal on private property, parks, and waterways. As noted in the Disaster Recovery Timeline (Figure 3-1), these specialized debris removal operations typically do not begin until roughly 30–60 days following a debris-generating incident. Specialized debris removal operations are often governed by DSG and require some level of FEMA pre-validation. However, if the City determines that there is an immediate and imminent threat to public health and safety, these programs can be expedited.

The following Recovery Checklists are critical in expediting and ensuring proper steps are taken during the debris removal process. The Post-Incident Recovery Checklists are also included in **Appendix B**. The Post-Incident Recovery Checklists are subdivided into the following time periods:

- 2 Days – 2 Weeks
- 2 Weeks – 1 Month
- 1 Month – 3 Months
- 3 Months – Project Completion

### 3.5.1 Post-Incident Recovery Checklist: 2 Days – 2 Weeks

- Open DMS.
- Prioritize roads/areas.
- Issue press release regarding segregation of debris.
- Begin ROW debris removal.
- Perform parks damage assessment.
- Begin environmental monitoring program of DMS.
- Coordinate with external agencies.



- Initiate discussions with FEMA.
- Obtain FEMA guidance for gated community and private property debris removal.

### **Open Debris Management Sites**

DMS will be opened, beginning with sites closest to the most heavily impacted areas of the City. Monitoring towers will be located at the ingress and egress of the DMS. Monitoring towers will be high enough so that tower monitors can verify the contents of the debris removal trucks.

### **Prioritize Roads/Areas**

After reviewing damage assessments and the concentration of debris within the City, areas that sustained more extensive damage may need to be prioritized, subdivided into smaller work zones and recorded in the City's GIS data.

### **Issue Press Release Regarding Segregation of Debris**

As soon as possible following the debris-generating incident, the designated Public Information Officer will issue a press release to various media sources and post it to the jurisdiction's website and social media sites. The press release will inform the public that the jurisdiction is responding to the incident and has activated its monitoring firm and debris clearance and removal contractors to begin debris removal activities. Information should include the following:

- Follow instructions from local officials on set-out procedures for disaster-related debris.
- Segregate disaster debris from regular household waste.
- Safely bring debris to the public right-of-way.
- Exercise caution when operating power tools and chainsaws.
- Help others who may need assistance with debris removal.

Sample public information messages are in **Appendix I**.

### **Begin ROW Debris Removal**

The City will direct the debris removal contractors to proceed with curbside collection. Curbside collection entails residents piling their disaster-related debris along the ROW. It is critical that residents segregate their debris in categories such as vegetative, C&D, HHW, electronics, and white goods. This will help prevent the contamination of debris loads and expedite the clean-up process. To assist the City in an "all-hazards approach" to debris removal efforts, the processes for HHW, and white goods debris removal are outlined below.

#### ***HHW Debris Removal***

HHW includes gasoline cans, aerosol spray cans, paint, lawn chemicals, batteries, fire extinguishers, fluorescent lamps, household electronics, etc.

HHW removal is eligible for FEMA reimbursement if the debris is a result of the debris-generating incident and removed from publicly maintained property and roadways whose maintenance is the responsibility of the City. HHW should be collected separately and disposed of or recycled at a properly permitted facility. Collection of HHW can be conducted internally or contracted out on a unit rate basis. The City will take the following steps regarding HHW removal:

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- Communicate to City residents the eligibility of HHW following an incident. It is important that residents separate HHW from other debris, such as vegetative, C&D, etc., to ensure that HHW does not enter the debris stream at DMS locations.
- Decide whether to establish HHW drop-off sites to augment or replace HHW curbside collection. This helps ensure that HHW is properly disposed. Measures should still be taken jointly by the debris removal contractor and the debris monitoring firm to identify, segregate, and dispose of intermingled HHW at DMS locations.
- Interface with the TCEQ. Describe the HHW collection program and permitted facilities to be used for disposal or recycling.

### ***White Goods Debris Removal***

White goods include refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, etc.

White goods debris removal is eligible for FEMA reimbursement if the debris is a result of the debris-generating incident and removed from publicly maintained property and roadways whose maintenance is the responsibility of the City. White goods debris that contains ozone-depleting refrigerants, mercury, or compressor oils need to have such materials removed by a certified technician before recycling. All state and federal laws should be followed regarding the final disposal of removed refrigerants, mercury, or compressor oils. Collection of white goods can be conducted internally or contracted out on a unit rate basis. The following action items are recommended to the City with regard to white goods removal:

- Communicate the eligibility of white goods to residents following an incident. It is important that residents separate white goods from other debris to ensure that white goods are not mixed with C&D or vegetative debris during collection.
- Interface with TCEQ. Describe the white goods collection program and permitted facilities to be used for disposal of recovered refrigerants, mercury, or compressor oils. Identify the processes to be used in processes white goods.

### ***Vegetative Debris***

Vegetative debris consists of whole trees, tree stumps, tree branches, tree trunks, and other leafy material. Depending on the size of the debris, the collection of vegetative debris may require the use of flatbed trucks, dump trucks, and grapple loaders.

Most vegetative debris consist of large piles of tree limbs and branches that are piled on the public ROW by the residents. The City will determine the number of times debris is collected before normal collection activities are resumed. The City will consult with FEMA regarding the number of passes that may be required to complete disaster debris removal.

Vegetative debris is bulky and consumes a significant volume of landfill space if buried. To minimize the use of landfill space, it is prudent to reduce the volume of vegetative debris before burying. Vegetative debris may be reduced by as much as 75 percent of its volume by mulching or grinding and as much as 90 percent of its volume through burning.

A hazardous tree or stump may be collected individually, while downed or fallen debris is collected from ROW or at a designated collection center. Tree and stump collection prices are typically

based on the size of the tree or stump and charged by unit. Other fallen or downed material is usually billed by weight (tons) or volume (CYs).

### **Electronic Waste**

Electronic waste (e-waste) includes televisions, desktop and laptop computers, computer attachments, stereo equipment, tablets, cell phones, and other electronic devices.<sup>9</sup>

E-waste debris removal is eligible for FEMA reimbursement if the debris is a result of the debris-generating incident and removed from publicly maintained property and roadways whose maintenance is the responsibility of the City.

Older television and computer monitors using a cathode ray tube can contain an average of four pounds of lead. Newer flat-screen televisions and monitors may have backlighting that contains mercury. These and other electronic devices may also contain lithium-ion batteries, chromium, cadmium, beryllium, nickel, zinc, and brominated flame retardants that must be handled properly and cannot be disposed of in landfills.<sup>10</sup> There are organizations that can accept e-waste for recycling. Resources for e-waste can be found in **Appendix E** of this plan and at the TCEQ electronics recycling webpage at <https://www.tceq.texas.gov/p2/recycle/electronics>.

### **Load Tickets**

For the debris categories outlined above, pre-printed load tickets will be used as reimbursement documentation for the City. An example of a load ticket is in **Appendix M**. The top portion of the ticket will be filled out by the collection monitor at the beginning of each load. The address field will be completed when the debris removal contractor has completed work. The collection monitor will also ensure the debris removal contractor is working within the scope of the contract with the City. The load ticket will then be given to the debris removal vehicle driver to turn in to the Disposal Monitor upon arrival at the DMS or final disposal site. The Disposal Monitor will complete the remaining portion of the load ticket. Load tickets may also be processed through electronic automated systems. The Disposal Monitor documents the amount of debris collected by making a judgment call reflecting the vehicle's fullness (typically on a percentage basis). The percentage documented for each debris removal vehicle is later applied to the calculated cubic yard capacity of the vehicle to determine the amount of debris collected.

### **Perform Parks Damage Assessment**

The Parks and Recreation Department and monitoring firm must identify vegetative hazards that require removal within City parks. Current eligibility criteria include:

- Leaning trees 2 feet in diameter or greater;
- Hanging limbs 2 inches in diameter or greater; and
- Uprooted stumps 2 feet in diameter or greater.

From a FEMA reimbursement perspective, eligibility criteria for cut work are extremely sensitive to the size and scale of the disaster. When surveying damages, it is extremely important for the City and its monitoring firms and debris removal contractors to be fully cognizant of all DSG.

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<sup>9</sup> Planning for Natural Disaster Debris, EPA, April 2019

<sup>10</sup> Ibid

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### **Begin Environmental Monitoring Program of DMS**

Throughout the duration of the project, data should be collected for use in the remediation and close-out of the DMS. Collected data should be compared to previous data to establish any remediation actions necessary to return the site to its original state. The following items should be included in an environmental monitoring program:

- **Sketches of Site Operations** – During the course of the project, operations at the DMS may expand, condense, or shift. Changes to the site should be documented along with the locations of debris reduction activity. The sketches and documentation will assist in determining areas of concern that may need additional sampling and testing during site closure.
- **Documentation of Issues at the Site** – Meticulous records should be kept documenting issues such as petroleum spills, hydraulic spills, or the discovery of HHW within debris at the site. This documentation will assist in the remediation of the site.

### **Coordinate with External Agencies**

The City will coordinate with TxDOT, Tarrant County, and other relevant agencies to ensure all City road segments are moving forward with debris removal operations. TxDOT is responsible for emergency road clearing activities and first pass debris removal on all state and federal roads within the City.

### **Initiate Discussions with FEMA**

It is critical that the Debris Managers and the debris monitoring firm clearly communicate debris removal plans and operations with FEMA. Clear communication fosters a coordinated effort that enhances the transparency of the operation for auditors and ensures maximum FEMA reimbursement.

### **Obtain FEMA Guidance for Gated Community and Private Property Debris Removal**

Eligibility of gated community and private property debris removal will be determined by FEMA on a case-by-case basis following an incident. Typically, the debris and devastation must be so widespread that debris removal from private property is a “public interest.” Under current PA Program guidelines, the City must show that the private property debris constitutes an immediate threat to life, public health, or safety, or to the economic recovery of the community at large.

For private property debris removal to be eligible for reimbursement, the City must submit a written request to the FEMA Federal Coordinating Officer before private property debris removal operations begin. The request will include the following information:

- **Immediate Threat Determination** – The City must provide documentation from the Texas DSHS or equivalent public health authority that debris on private property is a threat to public health and safety.
- **Documentation of Legal Responsibility** – The City must demonstrate that it has the legal authority to enter private property and gated communities and accepts the responsibility to abate all hazards, regardless of whether or not a federal disaster declaration is made.

- **Indemnification** – The Applicant must indemnify the Federal Government and its employees, agents, and contractors from any claims arising from the removal of debris from private property.

If private property debris removal is authorized and considered for the City, the following documentation will be required by FEMA:

- **Right-of-Entry and Hold Harmless Agreements** – The City will execute signed right-of-entry (ROE) and hold harmless agreements (HHA) documents with private property owners holding the federal government harmless from any damages caused to private property. A sample ROE/HHA agreement is included in **Appendix N**. The City may execute ROE and HHA forms prior to a disaster under the condition that the ROE and HHA form do not reference a particular incident or disaster number. The sample ROE/HHA provides a stipulation that the property owner will report to the City any insurance settlements paid to the property owner for debris removal on the property that has been performed at government expense. This will aid the City in recouping the costs of debris removal from private property.
- **Photos** – It is in the interest of the City to photograph conditions of private property before and after debris removal is completed. The photos will assist in the verification of address and scope of work on the property.
- **Private Property Debris Removal Assessment** – The assessment will be a property-specific form to establish the scope of eligible work on the property. The assessment can be in the form of a map or work order if the scope of work can be clearly identified.
- **Documentation of Environmental and Historic Review** – Debris removal efforts on private property must comply with all review requirements under 44 CFR (specifically parts 9, Floodplain Management and Protection of Wetlands, and 10, Environmental Considerations).

### 3.6 Post-Incident Recovery Checklist: 2 Weeks – 1 Month

- Maintain and evaluate ROW clean-up.
- Begin ROW stump removal, as necessary.
- Open additional DMS, 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.

#### 3.6.1 Maintain and Evaluate ROW Clean-up

Information on debris collection (vegetative, C&D, white goods, HHW, etc.) and completion progress will be documented by the debris monitoring firm and provided to the City on a daily basis. To ensure proper record keeping and reimbursement from all appropriate agencies, it is important for the City to announce the completion of first pass.

### 3.6.2 Begin ROW Stump Removal as Necessary

Following initial ROW debris removal efforts, the City and monitoring firm may determine a significant threat remains to the public in the form of hazardous stumps along the ROW. Before ROW stump removal operations commence, all applicable DSG criteria or FEMA Publication 104-009-2 for eligibility should be reviewed. FEMA's Recovery Policy for Hazardous Stump Extraction and Removal Eligibility is included in **Appendix O**. Also, as of the publication of this plan, FEMA Publication 104-009-2 defines a stump as hazardous if all of the following criteria are met:

- The stump has 50 percent or more of the root-ball exposed;
- The stump is greater than 2 feet or larger in diameter when measured 2 feet from the ground;
- The stump is located on a public ROW; and
- The stump poses an immediate threat to public health and safety.

### 3.6.3 Open Additional Debris Management Sites as Necessary

If the initial DMS are approaching maximum capacity, additional DMS may need to be prepared. The same procedures taken to open and monitor the initial DMS should be applied to any additional DMS the City may utilize.

### 3.6.4 Continue Daily Meetings with FEMA

It is critical that the City maintain strong communication with their assigned FEMA representatives. The daily meetings help to ensure maximum coordination and assist to expedite resolving any operational problems that may occur.

### 3.6.5 Begin Debris Removal from Private Property and Gated Communities

If approved, debris removal from private property and gated communities should begin.

### 3.6.6 Public Information Post-Incident Recovery

The project close-out press release should focus on clarifying any ineligible debris confusion and communicating a debris set-out deadline to minimize illegal dumping. Protocol for leaners and hangers and private property/gated community debris removal programs, if applicable, should be communicated at this time. Depending on the severity of the debris-generating incident, project close-out may be further away.

## 3.7 Post-Incident Recovery Checklist: 1 Month – 3 Months

- Maintain and evaluate ROW clean-up – vegetative and C&D.
- Begin ROW leaners and hangers program.

- Initiate haul-out.
- Progress to weekly meetings with the FEMA.

### 3.7.1 Maintain and Evaluate ROW Clean-up – Vegetative and C&D

Information on debris collection and completion progress will be documented by the debris monitoring firm and provided to the City on a daily basis. During this period, the City should announce the completion of the second pass and establish a deadline for residents to set out debris on the ROW as well as a deadline for the City's debris removal contractor to complete the third pass. In a smaller debris-generating incident, the second pass could be announced earlier.

### 3.7.2 Begin ROW Removal of Hazardous Limbs and Trees

A hazardous limbs and trees program should be initiated if it is determined that a significant threat remains to the public in the form of leaning trees and hanging limbs along the ROW. To ensure maximum reimbursement, all threats must be identified and verified against DSG criteria for eligibility prior to the commencement of cut work. It is important to note the City debris removal contractors may require lead time to transport specialty vehicles, equipment, and labor force to commence leaner/hanger work. Currently, FEMA Publication 104-009-2 provides the following guidance on eligibility requirements for hazardous limbs, trees, and stumps.

**Tree Removal** – A damaged tree is considered hazardous and eligible if the tree has a diameter of 6 inches or greater measured 4.5 feet above ground level, and the tree:

- Has a split trunk;
- Has a broken canopy; or
- Is leaning at an angle greater than 30 degrees.

**Broken Limb or Branch Removal** – Broken limbs and branches are eligible for removal if they are 2 inches or larger in diameter (measured at the point of break) and pose an immediate threat. An example is a broken limb or branch hanging over improved property or public-use areas such as sidewalks, playgrounds, or trails. It is important to note that only the minimum cut necessary to remove the hazard is eligible for reimbursement. In addition, FEMA will not fund the removal of broken limbs or branches on private property unless the following criteria are met:

- The limbs or branches extend over the public ROW;
- The limbs or branches pose an immediate threat; and
- The Applicant removes the hazard from the public ROW (without entering private property).

#### ***Unit Rate Tickets***

Unit rate tickets will be used as reimbursement documentation for the Leaners/Hangers Program. An example of a unit rate ticket is located in **Appendix M**. To ensure maximum reimbursement, debris monitors will use GPS devices to document the GPS coordinates of tree or hanger removals and take digital photos of the work done.

### 3.7.3 Initiate Haul-Out

At this point in the post-incident recovery process, reduced debris from DMS will be hauled to a final disposal site or recycled through one of the markets listed in **Appendix E**. Generally, for final disposal purposes, the most environmentally responsible and cost-effective method is for the City to recycle reduced debris. Any remaining reduced debris that cannot be recycled should be disposed of at permitted landfills with consideration to the cost structure of associated tipping fees.

It is important that the City and monitoring firm ensure the debris removal contractor attains proper disposal tipping fee information. **Appendix M** contains a sample haul-out ticket that will be used by the debris monitoring firm as reimbursement documentation for the City.

### 3.7.4 Progress to Weekly Meetings with the FEMA

Although strong communication with assigned FEMA representatives is still important, at this point in the debris removal operation, meetings can move to a weekly timeframe. The weekly meetings will still be critical in ensuring maximum coordination.

## 3.8 Recovery Checklist: 3 Months – Project Completion

- Complete all debris recovery activities.
- Identify ineligible debris on ROW.
- Complete the disposal of reduced debris.
- Close-out and remediate DMS.
- Conduct project close-out meetings with FEMA and external agencies.

### 3.8.1 Complete all Debris Recovery Activities

The debris removal contractors will identify and remove all remaining eligible debris piles.

#### Identify Ineligible Debris on ROW

Once ineligible debris on the ROW is identified, the City should proceed in one of two ways:

- Hold individual homeowners responsible for the disposal of ineligible debris.
- Utilize internal equipment for disposal of the ineligible debris.
- Task the debris removal contractor with the removal of ineligible debris and incur the associated cost. This debris should be hauled directly to a final disposal landfill or transfer station to reduce associated handling costs.

#### Complete the Disposal of Reduced Debris

Before project closure, remaining reduced debris at DMS should be recycled or hauled to a local landfill for final disposal. See **Appendix E** for locations of landfills.



### **Close-Out and Remediate Debris Management Sites**

TCEQ must be contacted before final closure of the DMS to ensure all required actions are taken. Generally, DMS locations must be returned to their original environmental state. Restoration of the DMS includes removing all remnants of operations and the remediation of any contamination that may have occurred during operations. A final sample of environmental data should be collected to ensure the site is returned to its original state. Final closure of the DMS will require written notice to TCEQ. The results of any required environmental samples should be included with the written notice.

### **Conduct Project Close-Out Meetings with FEMA and External Agencies**

Prior to the project close-out meeting, the City will receive detailed data from the debris monitoring firm regarding their debris removal operations. The City, in conjunction with the debris monitoring firm, will compile all contractor invoices, contracts, and other documentation supporting debris removal operations in preparation for the project close-out meeting.



## Section 4

# ENVIRONMENTAL CONSIDERATIONS AND OTHER REGULATORY REQUIREMENTS

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The information described in this section identifies the regulatory requirements and guidance for local governments engaging in debris clean-up operations. The City should review the regulatory information on an annual basis not only to familiarize themselves with the governing statutes but to also identify any changes to the regulations and guidelines. The City will coordinate with Tarrant County, state, and federal officials to ensure compliance with environmental and other regulatory standards.

## 4.1 Federal Regulations and Guidance

### 4.1.1 National Environmental Policy Act (NEPA)

NEPA regulations can be found in CFR Parts 1500 – 1508. The act requires that FEMA consider the environmental impacts of proposed actions and reasonable alternatives to those actions. The U.S. Department of Homeland Security publishes NEPA requirements and provides a decision-making process that FEMA must follow to fund a project.

### 4.1.2 Resource Conservation and Recovery Act (RCRA)

RCRA governs the disposal of solid waste and hazardous waste. The act also provides planners with greater awareness of environmental considerations and regulations for dealing with disaster debris. Additional information about RCRA is at <http://www.epa.gov/rcra>.

### 4.1.3 National Historic Preservation Act (NHPA)

In conducting debris operations, the City must consider how such operations will affect historic properties. Historic properties include buildings or groups of buildings, structures, objects, landscapes, archeological sites as well as properties listed in or eligible for inclusion in the National Register of Historic Places. Section 106 of the NHPA requires FEMA to consider how a project might affect such properties.

### 4.1.4 Endangered Species Act

Projects must be examined to ensure they will not jeopardize the continued existence of any threatened or endangered species (listed species) and critical habitats. FEMA must consult with the U.S. Fish and Wildlife Service and the NOAA Fisheries to ensure the conservation of listed species.

### 4.1.5 Clean Water Act (CWA)

The Clean Water Act provides regulations for the discharges of pollutants in the waters of the United States. According to the CWA it is unlawful to discharge any pollutant from a specific

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source into navigable waters without the appropriate CWA permits from the U.S. Army Corps of Engineers or State Regulatory Agency.

### **4.1.6 Clean Air Act (CAA)**

The CAA seeks to protect air quality through the reduction of smog and atmospheric pollution. Air compliance measures in debris management operations may include air monitoring and dust abatement.

### **4.1.7 National Emission Standard for Hazardous Air Pollutants (NESHAP)**

Provides standards for demolition of structures containing asbestos as well as the disposal and reporting of asbestos. The Texas DSHS Asbestos Program is tasked with enforcing asbestos regulations in the State of Texas.

### **4.1.8 Executive Order 11990, Protection of Wetlands**

Executive Order 11990, Protection of Wetlands, requires federal agencies to minimize or avoid activity that adversely affects wetlands and encourage the preservation and enhancement of the beneficial functions of wetlands.

### **4.1.9 Executive Order 12898, Environmental Justice**

Executive Order 12898 requires federal agencies to identify and address any disproportionately high and adverse human health or environmental effects on minority and low-income populations as a result of their actions.

### **4.1.10 EPA Publication EPA A530-K-08-001, Planning for Natural Disaster Debris**

The Planning for Natural Disaster Debris publication discusses management of debris from natural disasters such as hurricanes, earthquakes, tornadoes, floods, wildfires, and winter storms. The document is designed to assist planners in the beginning stages of the planning process or to help a planner revise an existing Debris Management Plan. It provides planners with greater awareness of environmental protectiveness when dealing with disaster debris.

Under the current federal system, FEMA coordinates response and recovery efforts for all presidential declared disasters. FEMA provides guidance documents for local governments regarding disaster planning and response.

### **4.1.11 FEMA Publication FP 104-009-2 – PA Program and Policy Guide 2016**

The Public Assistance Program and Policy Guide overviews FEMA PA Program protocols immediately following a disaster. The PA Program provides the basis for the federal/local cost-sharing program. This document describes entities eligible for reimbursement under the PA

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## **ENVIRONMENTAL CONSIDERATIONS AND OTHER REGULATORY REQUIREMENTS**

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Program, documentation necessary to ensure reimbursement, and special considerations about which local governments should be aware to maximize eligible activities.

An electronic version of FEMA Publication 104-009-2 is available at <http://www.fema.gov/public-assistance-policy-and-guidance>

### **4.1.12 Disaster-Specific Guidance**

DSG is a policy statement issued in response to a specific post-event situation or need in a state or region. Each DSG is issued a number and is generally referred to along with its numerical identification.

These guidance documents typically relate to authorization of private property clean-up, clean-up of stumps and payment for that, or notification of large projects. Staff should be aware of any new DSG issued by FEMA following an event.

## **4.2 State of Texas Regulatory and Technical Assistance**

### **4.2.1 Texas Solid Waste Disposal Act**

Texas Health and Safety Code, Title 5, Subtitle B, Chapter 361

The Texas Solid Waste Disposal Act outlines state regulations regarding the management of solid waste including accounting for hazardous wastes that are generated.

### **4.2.2 Texas Commission on Environmental Quality (TCEQ)**

The TCEQ issues emergency permits for debris incineration and advice and assistance for debris disposal. Assistance is also provided to local jurisdictions on the potential environmental impacts of debris removal and disposal operations.

### **4.2.3 Texas Department of State Health Services (DSHS)**

DSHS provides assistance regarding health and safety issues in debris removal and disposal operations. The Asbestos Program under DSHS is tasked with enforcing asbestos regulations in the State of Texas.

### **4.2.4 Texas Historical Commission (THC)**

The THC is responsible for review of any historical issues pursuant to Title 36 of the Code of Federal Regulations (36 CFR) Part 800.12. They also conduct a review of post-disaster DMS plan applications.

### **4.2.5 Texas Department of Transportation (TxDOT)**

TxDOT is responsible for the design, construction, and maintenance of the state highway system. TxDOT acts as the lead agency for emergency roadway debris clearance, removal, and disposal efforts along state and federal highways.

### **4.2.6 Texas Animal Health Commission (TAHC)**

The TAHC provides assistance to local jurisdictions regarding the disposition of dead animals following a disaster.

## **4.3 Other Relevant Regulations**

The two primary directives developed by the federal government that provide for the authorization and use of federal funds to reimburse local governments for disaster-related expenses are the Robert T. Stafford Disaster Relief and Emergency Assistance Act, the CFR – Title 44 Emergency Management and Assistance, and the SRIA of 2013. A brief summary of these laws is provided below.

### **4.3.1 Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act)**

The Stafford Act provides the authorization for the PA Program. The fundamental provisions of this act are as follows:

- Assigns FEMA the authority to administer federal disaster assistance;
- Defines the extent of coverage and eligibility criteria of the major disaster assistance programs;
- Authorizes grants to the states; and
- Defines the minimum federal cost-sharing levels.

### **4.3.2 Code of Federal Regulations (CFR): Title 44 – Emergency Management and Assistance**

Procedural requirements for the PA Program operations are provided by 44 CFR. These regulations are designed to implement a statute based upon FEMA’s interpretation of the Stafford Act. They govern the PA Program and outline program procedures, eligibility, and funding.

### **4.3.3 Title 2 CFR Part 200**

Title 2 CFR Part 200 establishes regulations regarding administrative requirements, cost principles, and audit requirements.

### 4.3.4 Sandy Recovery Improvement Act (SRIA) of 2013

The law authorizes changes to the way FEMA may deliver federal disaster assistance to survivors. Key provisions of the act are as follows:

- Provides substantially greater flexibility in use of federal funds and less administrative burden if applicants accept grants based on fixed capped estimates, which may be provided by applicants' licensed engineer and validated by independent expert panel.
- Offers a package of cost share adjustments, reimbursement for force account, and retention of program from recycling to speed debris removal and encourage pre-disaster debris planning.
- Allows PA applicants for all disasters declared on or after October 30, 2012 an option to request binding arbitration for certain projects with an amount in dispute of over \$1 million after first appeal, instead of pursuing a second appeal under FEMA's PA Program.

### 4.3.5 The Disaster Recovery Reform Act of 2018 (DRRA)

The DRRA was signed into law in October 2018. The reforms made by this law acknowledge the shared responsibility for disaster response and recovery, aim to reduce the complexity of FEMA, and build the nation's capacity for the next catastrophic event.

The law amends the Robert T. Stafford Disaster Relief and Emergency Assistance Act through 56 distinct provisions that direct changes to FEMA policies and regulations. Key provisions of the DRRA related to debris management functions include the following:

#### **Section 1215 – Management Costs**

Expands the definition of management costs to include both direct and indirect administrative expenses by the state, local, tribal, or territorial (SLTT) government. It also requires FEMA to reimburse PA and Hazard Mitigation Grant Program (HMGP) management costs by the following amounts:

- PA – up to 12% of the total award amount
  - 7% for recipient
  - 5% for subrecipient
- HMGP – up to 15% of the total award amount
  - 10% for recipient
  - 5% for subrecipient

#### **Section 1232 – Disaster Relief Hazards (Local Impact and Multiple Recent Disasters)**

Direct the FEMA Administrator to give greater consideration to local impacts when the agency provides its recommendation to the President on whether to issue a Major Disaster Declaration. PA regulatory factors include estimated cost of assistance, localized impacts, insurance coverage in force, hazard mitigation, recent multiple disasters, and other federal assistance programs.

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### **Section 1234 – National Public Infrastructure Pre-Disaster Hazard Mitigation**

Authorizes the National Public Infrastructure Pre-Disaster Mitigation fund, which will be funded through the Disaster Relief Fund as a 6 percent set aside from estimated disaster grant expenditures. This allows for a greater investment in mitigation before a disaster. This new program is named Building Resilient Infrastructure and Communities (BRIC). BRIC has replaced the Pre-Disaster Mitigation program.

### **Section 1239 – Public Assistance Declaration Factors (Cost of Assistance Estimates)**

Directs FEMA to reconsider all factors used to evaluate a request for a Major Disaster Declaration for PA, specifically the estimated cost of assistance (i.e., the per capita indicator).

### **Section 1235 – Additional Mitigation Activities (a – b)**

- a. **Resilience** – Ensures HMGP funding increases resilience to future damage, hardship, loss, or suffering.
- b. **PA Codes and Standards** – Authorizes FEMA to provide Public Assistance funding to replace and restore disaster-damaged facilities to the latest published editions of relevant consensus-based codes and standards to ensure that facilities are restored in a manner that allows them to be resilient.
  - [Interim Policy](#) was published in November of 2019.
  - [FAQ](#) was published in February of 2020.

### **Section 1241 – Post-Disaster Building Safety Assessment**

Directs FEMA to develop guidance for building experts to use when they evaluate structures for safety and habitability after a disaster.

In November 2019, FEMA published the [Post-disaster Building Safety Evaluation Guidance](#).

### **Section 1225 – Audit of Contracts**

Prohibits FEMA from providing reimbursement to any state, local, tribal, or territorial government, or private nonprofit for activities made pursuant to a contract that purports to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General.

The Procurement Disaster Assistance (PDAT) Field Manual was last updated in October 2019 and can be found [here](#).

### **Section 1216 Section (c) – Statute of Limitations**

Changes the beginning of the statute of limitations for recoupment of PA from state or local governments to run from the close-out of individual projects.



## Section 5

# PLAN MAINTENANCE

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For this plan to maintain viability, the plan should be updated annually, and personnel should be trained on the content prior to a disaster. Since FEMA updates debris operations program guidance throughout the year based on lessons learned from recent disasters, it is important to review the most recent guidance and incorporate those changes into the plan. This section explains the actions the City will take to ensure it is current and relevant.

## 5.1 Plan Review and Approval

The City will conduct an annual review of the DDMP. The plan will be updated based on organizational changes, new policies and guidance, and lessons learned from actual debris incidents. Changes made to the plan will be noted on a plan changes log as needed.

## 5.2 Training for Personnel

Personnel must be trained to ensure they are prepared to fulfill their role in a debris-generating emergency. The City will institute the following training for personnel with responsibilities in debris management:

### General

- Personnel will be trained in their specific roles and responsibilities.
- Personnel will be trained in the ICS to the appropriate level for their position.
- All personnel with debris management responsibilities will participate in a briefing on safety policies and procedures.
- Personnel with responsibility for preparing documentation for reimbursement will receive training on the FEMA PA Program.
- Personnel operating equipment will be trained to operate any equipment they are responsible for competently and safely.

### Debris Managers

- Debris Managers should be trained in the regulatory requirements for debris operations, including:
  - Health and safety
  - Environmental and historical preservation
  - Procurement
  - Federal disaster grant programs

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- Considerations for individuals with disabilities and access and functional needs
- Damage assessment for debris

### Finance and Administration

- Finance and Administration staff will be trained in regulatory requirements for debris operations, including:
  - Procurement
  - Federal disaster grant program
  - Documentation needed for reimbursement of expenses

### Training Available Through FEMA

- FEMA E0202: Debris Management Planning for State, Tribal, and Local Officials. This is a 24-hour (4-days) class designed to provide an overview of issues and recommended actions necessary to plan for, respond to, and recover from a major debris-generating event with emphasis on State, local, and tribal responsibilities.
- FEMA IS – 0632.a Introduction to Debris Operations. This is a 2-hour online course designed to familiarize participants with general debris removal operations and identify critical debris operations issues.
- FEMA IS – 1000 Public Assistance Program and Eligibility. This is an 8-hour online course designed to provide an overview of Public Assistance project eligibility and requirements.
- FEMA IS – 1009 Conditions of the Public Assistance Grant. This is a 7-hour course that is designed to identify strategies to better enable Applicants to execute the Public Assistance Grant, describe the Federal requirements for receipt of Federal funds, and inform Applicants of actions that may jeopardize Public Assistance grant funding and potential remedies for non-compliance.

## 5.3 Exercises

Exercises are essential to maintaining readiness and determining the effectiveness of plans, personnel, and resources in responding to a debris-generating incident. Workshops and exercises will be conducted periodically to test the ability of the City to coordinate resources for debris operations.

Following exercises, an after action report will be developed to document strengths and areas needing improvement. An improvement plan will be developed to list corrective actions, identify individuals or agencies responsible for completing the corrective actions, and establish a timeline for completion.

## Section 6

# ACRONYMS AND DEFINITIONS

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<b>44 CFR</b>	Title 44 of the Code of Federal Regulations
<b>BOAT</b>	Building Officials Association of Texas
<b>BRIC</b>	Building Resilient Infrastructure and Communities
<b>C&amp;D</b>	Construction and Demolition
<b>CAA</b>	Clean Air Act
<b>CFR</b>	Code of Federal Regulations
<b>City</b>	City of Southlake, Texas
<b>CWA</b>	Clean Water Act
<b>CY</b>	Cubic Yards
<b>DDC</b>	Disaster District Committee
<b>DDMP</b>	Disaster Debris Management Plan
<b>DFIRM</b>	Digital Flood Insurance Rate Map
<b>DMOC</b>	Debris Management Operations Center
<b>DMS</b>	Debris Management Site
<b>DPS</b>	Department of Public Safety
<b>DRRA</b>	Disaster Recovery Reform Act of 2018
<b>DSG</b>	Disaster-Specific Guidance
<b>DSHS</b>	Texas Department of State Health Services
<b>EF</b>	Enhanced Fujita
<b>EOC</b>	Emergency Operations Center
<b>EPA</b>	Environmental Protection Agency
<b>ER</b>	Emergency Relief
<b>E-Waste</b>	Electronic Waste
<b>EWP</b>	Emergency Watershed Protection
<b>FEMA</b>	Federal Emergency Management Agency
<b>FHWA-ER</b>	Federal Highway Administration-Emergency Relief
<b>GIS</b>	Geographic Information Systems
<b>GLO</b>	Texas General Land Office
<b>GPS</b>	Global Positioning System
<b>HAZMAT</b>	Hazardous Materials
<b>HHA</b>	Hold Harmless Agreement

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<b>HHSC</b>	Texas Health and Human Services Commission
<b>HHW</b>	Household Hazardous Waste
<b>HMGP</b>	Hazard Mitigation Grant Program
<b>HUD</b>	Housing and Urban Development
<b>ICS</b>	Incident Command System
<b>MOU</b>	Memorandums of Understanding
<b>NEPA</b>	National Environmental Policy Act
<b>NESHAP</b>	National Emission Standard for Hazardous Air Pollutant
<b>NHPA</b>	National Historic Preservation Act
<b>NRCS</b>	Natural Resources Conservation Service
<b>NOAA</b>	National Oceanic and Atmospheric Agency
<b>PA</b>	Public Assistance
<b>PDAT</b>	Procurement Disaster Assistance
<b>PDMG</b>	Program Delivery Manager
<b>PW</b>	Project Worksheets
<b>PWERT</b>	Public Works Emergency Response Team
<b>QA/QC</b>	Quality Assurance/Quality Control
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>ROE</b>	Right-of-Entry
<b>ROW</b>	Right-of-Way
<b>SLTT</b>	State, Local, Tribal, or Territorial
<b>SRIA</b>	Sandy Recovery Improvement Act
<b>Stafford Act</b>	Robert T. Stafford Disaster Relief and Emergency Assistance Act
<b>STAR</b>	State of Texas Assistance Request
<b>State</b>	The State of Texas
<b>TAHC</b>	Texas Animal Health Commission
<b>TCEQ</b>	Texas Commission on Environmental Quality
<b>TDEM</b>	Texas Division of Emergency Management
<b>THC</b>	Texas Historical Commission
<b>TxDOT</b>	Texas Department of Transportation
<b>USACE</b>	United States Army Corps of Engineers

**Applicant** – State agency, local government, or eligible private nonprofit organization that intends on applying for FEMA PA grants.

**Code of Federal Regulations: Title 44 – Emergency Management and Assistance** – The Code of Federal Regulations – Title 44 Emergency Management and Assistance (44 CFR) provide procedural requirements for the PA Program operations. These regulations are designed to implement a statute based upon FEMA’s interpretation of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act). They govern the PA Program and outline program procedures, eligibility, and funding

**Construction and Demolition (C&D) Debris** – FEMA Publication 104-009-2 defines C&D debris as damaged components of buildings and structures such as lumber and wood, gypsum wallboard, glass, metal, roofing material, tile, carpeting, and floor coverings, window coverings, plastic pipe, concrete, fully cured asphalt, heating, ventilation, and air conditioning systems and their components, light fixtures, small consumer appliances, equipment, furnishings, and fixtures. Current eligibility criteria include:

- Debris must be located within a designated disaster area and be removed from an eligible Applicant’s improved property or ROW;
- Debris removal must be the legal responsibility of the Applicant; and
- Debris must be a result of the major disaster incident.

**Disaster Recovery Reform Act (DRRA)** – The DRRA was signed into law in October 2018. The reforms made by this law acknowledge the shared responsibility for disaster response and recovery, aim to reduce the complexity of FEMA, and build the nation’s capacity for the next catastrophic event. The law amends the Robert T. Stafford Disaster Relief and Emergency Assistance Act through 56 distinct provisions that direct changes to FEMA policies and regulations.

**Debris Removal Contractor** – The debris removal contractor is contracted by the City to remove and dispose of debris that is a result of a severe debris-generating incident.

**Disaster-Specific Guidance (DSG)** – DSG is a policy statement issued in response to a specific post-incident situation or need in a state or region. Each DSG is issued a number and is generally referred to along with their numerical identification.

**FEMA Publication FP 104-009-2 – Public Assistance Program and Policy Guide (PAPPG)** – Combines all Public Assistance policy into a single volume and provides an overview of the PA Program implementation process with links to other publications and documents that provide additional process details. It provides a general overview of the FEMA PA Program protocol immediately following a disaster. The PA Program provides the basis for the federal/local cost-sharing program. This document specifically describes the entities eligible for reimbursement under the PA Program, the documentation necessary to ensure reimbursement and any special considerations that local governments should be aware of to maximize eligible activities.

**Force Account Labor** – The use of the City’s own personnel and equipment. Below force account labor information from Chapter 6, Section II of the PAPPG.

- For Permanent Work, both straight-time and overtime labor costs are eligible for both budgeted and unbudgeted employee hours. For Emergency Work, only overtime labor is

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eligible for budgeted employee hours. For unbudgeted employees performing Emergency Work, both straight-time and overtime labor are eligible. Overtime is time worked beyond an employee's scheduled working hours as defined by the Applicant's pre-disaster pay policy.

- Under the Alternative Procedures authorized by Section 428 of the Stafford Act, straight-time labor costs are eligible for budgeted employees conducting eligible debris removal (Category A) activities.
- The Applicant may assign an employee to perform work that is not part of the employee's normal job. For example, a police officer may clear debris. FEMA provides PA funding based on the reassigned employee's normal pay rate, not the pay level appropriate to the work, because the Applicant's incurred cost is the employee's normal pay rate.
- Straight-time of a permanent employee funded from an external source (such as a grant from a federal agency or statutorily dedicated funds) is eligible if the employee is reassigned to perform eligible Emergency Work that the external source does not fund. FEMA must confirm that no duplication of funding exists prior to approval.
- The Applicant may need to temporarily replace an employee who is responding to the incident. Overtime costs for the backfill employee are eligible even if the backfill employee is not performing eligible work as long as the employee that he/she is replacing is performing eligible Emergency Work.
- Straight-time of essential employees called back to work from a budget-related furlough due to the declared incident is eligible if the costs are not budgeted.
- Second-level supervisors and above (e.g., commissioners, mayors, department directors, police and fire chiefs) are usually exempt employees.<sup>129</sup> Therefore, overtime costs related to these types of employees are ineligible, unless the Applicant:
  - Demonstrates that the employee was directly involved with a specific project;
  - Normally charges that individual's time to specific projects regardless of Federal funding; and
  - Incurs overtime costs for the employee in accordance with a labor policy that meets the criteria in Chapter 6:II.A. Labor Policies.
- Extraordinary costs (such as call-back pay, night-time and weekend differential pay, and hazardous duty pay) for essential employees who are called back to duty during administrative leave to perform eligible Emergency Work are eligible if costs are paid in accordance with a labor policy that meets the criteria above.
- Administrative leave or similar labor costs incurred for employees sent home or told not to report due to emergency conditions are ineligible.

**Hazardous Limb** – A limb is hazardous if it poses a significant threat to the public. The current eligibility requirements for hazardous limbs according to FEMA Publication FP 104-009-2 are:

- The limb is greater than two inches in diameter;
- The limb is still hanging in a tree and threatening a public-use area; and
- The limb is located on improved public property.

**Hazardous Stump** – A stump is defined as hazardous and eligible for reimbursement if all of the following criteria are met:

- The stump has 50 percent or more of the root-ball exposed;
- The stump is greater than 2 feet in diameter when measured 2 feet from the ground;
- The stump is located on a public ROW; and
- The stump poses an immediate threat to public health and safety.

**Hazardous Tree** – A tree is considered hazardous when the tree’s present state is caused by a disaster, the tree poses a significant threat to the public and the tree is six inches in diameter or greater, measured 4.5 feet from the ground. The current eligibility requirements for leaning trees according to FEMA Publication 104-009-2 are:

- The tree has a broken canopy;
- The tree has a split trunk;
- The tree is leaning at an angle greater than 30 degrees.

**Household Hazardous Waste (HHW)** – The RCRA defines hazardous wastes as materials that are ignitable, reactive, toxic, or corrosive. Examples of HHW include items such as paints, cleaners, pesticides, etc. Due to the nature of hazardous waste certified technicians must be used to handle, capture, recycle, reuse, and dispose of hazardous waste. The eligibility criteria for HHW are as follows:

- HHW must be located within a designated disaster area and be removed from an eligible Applicant’s improved property or ROW;
- HHW removal must be the legal responsibility of the Applicant; and
- HHW must be a result of the major disaster incident.

**Monitoring Firm** – The debris monitoring firm is an organization under contract with the City to monitor debris removal operations. The debris monitoring firm ensures the debris removal contractor is working within the scope of work contracted by the City and documents debris removal operations.

**Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act)** – Provides the authorization of the PA Program. The fundamental provisions of this act are as follows:

- Assigns FEMA the authority to administer federal disaster assistance;
- Defines the extent of coverage and eligibility criteria of the major disaster assistance programs;
- Authorizes grants to the states; and
- Defines the minimum federal cost-sharing levels.

**Sandy Recovery Improvement Act (SRIA) of 2013** – The law authorizes changes to the way FEMA may deliver federal disaster assistance to survivors. Key provisions of the act are as follows:

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- Provides substantially greater flexibility in use of federal funds and less administration burden if applicants accept grants based on fixed capped estimates, which may be provided by applicants' licensed engineer and validated by independent expert panel.
- Offers a package of cost share adjustments, reimbursement for force account, and retention of program from recycling to speed debris removal and encourage pre-disaster debris planning.
- Allows PA applicants for all disasters declared on or after October 30, 2012 an option to request binding arbitration for certain projects with an amount in dispute of over \$1 million after first appeal, instead of pursuing a second appeal under FEMA's PA Program.

**Vegetative Debris** – As outlined in FEMA Publication 104-009-2, vegetative debris consists of whole trees, tree stumps, tree branches, tree trunks, and other leafy material. Vegetative debris will largely consist of mounds of tree limbs and branches piled along the public ROW by residents and volunteers. Current eligibility criteria include:

- Debris must be located within a designated disaster area and be removed from an eligible Applicant's improved property or ROW;
- Debris removal must be the legal responsibility of the Applicant; and
- Debris must be a result of a Presidentially declared major disaster incident.

**White Goods** – As outlined in FEMA Publication 104-009-2, white goods are defined as discarded household appliances such as refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, and water heaters. White goods can contain ozone-depleting refrigerants, mercury, or compressor oils that the federal Clean Air Act prohibits from being released into the atmosphere. The Clean Air Act specifies that only certified technicians can extract refrigerants from white goods before they can be recycled. The eligibility criteria for white goods are as follows:

- White goods must be located within a designated disaster area and be removed from an eligible Applicant's improved property or ROW;
- White goods removal must be the legal responsibility of the Applicant; and
- White goods must be a result of the major disaster incident.