



Tompkins County

Resilience and Recovery Plan

Debris Management Plan



TETRA TECH

April 2022

Debris Management Plan

April 2022

Prepared for

**Tompkins County Department of
Planning and Sustainability**

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This Debris Management Plan is a Component of the Tompkins County Resiliency and Recovery Plan and was prepared with funding provided by the New York State Department of State under Title 3 of the Environmental Protection Fund.



Debris Management Plan Overview

To help support community recovery from long term hazard events, Tompkins County obtained funding from the New York State Department of State to develop the *Tompkins County Resiliency and Recovery Plan*. One of the components of this effort is a Debris Management Plan to help Tompkins County be better prepared to address disaster event debris management. In order to effectively manage this type of debris, it is important that communities organize themselves to coordinate an effective debris clearing and management operation and do so in a way that they may be eligible to receive federal reimbursement for that work.

This debris management plan provides a framework, including an Action Strategy for:

- the recommended steps Tompkins County will need to take well in advance of a disaster, and during “normal” times, to help further strengthen an effective debris management program;
- the estimation for the amount and type of debris that would be generated from a disaster event, which would warrant the activation of the debris management plan; and
- the recommended debris management practices that the County and municipalities will implement immediately prior to a large-scale debris management event as well as through the various post-disaster response and recovery stages, as shown on the timeline below.



Description of Disaster Event That May Require Formal Activation of Debris Management Plan (Section 1.5)

The most likely type of disaster event that could result in the need to activate a Debris Management Plan would be a 1% annual chance flood event. In hazard mitigation terms for Tompkins County, this would be a *Low Probability – High Consequence* debris-generating incident that may significantly impact the County and multiple municipalities. In this case, resources would likely be severely strained throughout the entire region. A Presidential Disaster Declaration would also be imminent due to significant damage to roads and bridges, debris estimates exceeding 55,000 cubic yards.



Action Strategy for Debris Management Event Response and Recovery

To help guide the active disaster debris management process a series of pre-incident preparations (Section 3.2), post-incident response actions (Section 3.3) and post-incident recovery actions (Section 3.4) are recommended based on best management practices (BMPs) and Federal Emergency Management Agency (FEMA) guidance.

To further assist with this each stage of debris management planning a series of resources have been included in this guide's appendices (See Appendices A - O).

Below is a summary of recommended actions to take now and each year when there is no imminent threat of a disaster.

Action Strategy for Recommended Immediate Debris Management Planning Steps

- **Formalize Debris Management Roles** – Set the roles and responsibilities of each department and other involved outside agencies as outlined in Section 2 to ensure that all impacted departments, municipalities, and external agencies maintain the capacity to manage debris in a timely and effective manner should a disaster strike the County or its municipalities.
- **Review Debris Management Contracts** - Establish and review pre-positioned contracts with monitoring firms and debris removal contractors
- **Establish Reserve Fund** - Establish fund to help facilitate costs that would need to be incurred by the County at the start of an active debris generating event.
- **Assess Debris Managements Sites** – Assess, organize and map ideal debris management sites including locations outside of the Special Flood Hazard Area.
- **Analyze Debris Management Sites Equipment and Infrastructure**– Identify DMS locations, then identify any equipment that should be acquired, or infrastructure improvements to be made, and assist with larger scale debris management.
- **Perform Annual Review of Debris Management Plan** - Help prepare for potential debris-generating events through recommendations from the County review and update to its debris management plan prior to severe weather season (generally prior to Fall). To further assist with this, it is recommended that the County coordinate a pre-season kickoff meeting between the County, municipalities, and their pre-positioned monitoring and debris removal staff/contractors, if possible. Such a meeting could be done in concert with the annual hazard mitigation plan implementation and update meetings, or as a part of an emergency operations planning meeting.



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Promulgation Statement

Promulgated herewith is the Tompkins County Debris Management Plan (DMP), a component of the Tompkins County Resiliency and Recovery Plan. Authority for this plan is provided by Article 2-B of the New York State Executive Law. It provides a framework within which Tompkins County can plan and perform necessary debris management operations during and following an emergency, disaster, or planned event.

This Tompkins County Resiliency and Recovery Plan was reviewed and accepted by the Tompkins County Legislature on [Date]. It will be revised and updated as required. All recipients are requested to advise the Tompkins County Department of Emergency Response of any changes that might result in its improvement or increase its usefulness. Plan changes will be transmitted to all addressees on the distribution list.

(Chief Elected Official)

(County Administrator)

(Director, Department of Emergency Response)



Section 1 Introduction

1.1 Overview

1.1.1 Purpose

Tompkins County (the County) approved the preparation of this Debris Management Plan (DMP) to better respond to various emergency debris removal situations throughout the County. The purpose of this plan is to outline the components critical to the success of a debris removal operation. This plan provides key information that will help the County with two aspects related to debris management.

1. **Preparing for Debris Management-** Central to the success of debris removal operations is clarifying the following elements prior to a debris-generating incident:
 - Identifying the parties involved, including municipal officials and private companies, and their roles and responsibilities for debris management.
 - Understanding the rules, regulations, and guidelines enacted by the Federal Emergency Management Agency (FEMA) and other agencies governing debris removal.
 - Outlining the debris collection process by hazard event type.
 - Clarifying the debris disposal process, including extreme situations, where debris may need to be staged outside existing infrastructure in temporary debris management for reduction and hauled for final disposal.

The specific Debris Management Planning Recommendations are outlined in Section 3.2.

2. **Pre-Event and Active Event Debris Management** – The bulk of this DMP organizes the recommendations that the County will follow to coordinate and effectively manage debris removal effort following an event that affects the County, or its communities, as a major debris-generating incident. Those specific active debris management roles are outlined in Section 2 and recommended actions framed in Sections 3.2-3.8.

1.1.2 Plan Development

Developed as a part of the *Tompkins County Resiliency and Recovery Plan*, this DMP provides a coordinated response blueprint for the County, other organizations, and contracted debris hauling and monitoring firms with a role in disaster debris operations. Departments within the County and its municipalities, as well as regional and private planning partners, were instrumental in the development of this plan and in clarifying roles and responsibilities in the event of a debris-generating incident. Tompkins County formed a *Debris Management Working Group* to lead the development of this plan, whose membership included representatives from the following organizations:

- Tompkins County Department of Emergency Response
- Tompkins County Department of Planning and Sustainability



- Tompkins County Department of Recycling and Materials Management
- Tompkins County Facilities Department
- Tompkins County Health Department
- Tompkins County Highway Department
- City of Ithaca Department of Public Works
- Town of Lansing Highway Department
- Casella Waste Systems
- Finger Lakes ReUse

In addition, the planning process included outreach to and input from the County's municipalities, institutions of higher education (including Cornell University, Ithaca College, and Tompkins-Cortland Community College), and other stakeholders.

1.1.3 Scalability

Debris management operations are scalable, depending on the needs of the situation. For small events that generate low quantities of debris, debris management may be performed with the organizations identified in this DMP having little to no variation from day-to-day operations. In contrast, a major disaster (e.g., the 1 percent annual chance flood or severe storms that affect large areas of the County) may generate far more debris than the County and municipalities can manage with day-to-day operations and will result in the activation of the full set of provisions of the DMP. Following the DMP during these large-scale operations is critical for ensuring that the County and municipalities meet FEMA's requirements for debris management operations under the Public Assistance (PA) program, so that the County and municipalities can maximize their reimbursement for debris management operations after an event that results in a Presidentially-declared disaster under the Stafford Act.

1.2 Authority

This DMP is developed, promulgated, and maintained under the following federal, state, county, and local statutes and regulations:

1.2.1 Municipal

- Chapter 196 of the City of Ithaca Code¹

1.2.2 County

- Chapter 140 of the Tompkins County Code²

¹ [City of Ithaca, NY Garbage and Refuse \(ecode360.com\)](http://www.cityofithaca.org/garbage-and-refuse)

² [Tompkins County, NY Solid Waste \(ecode360.com\)](http://www.tompkinscountyny.gov/solid-waste)



1.2.3 State

- 1 New York Codes, Rules and Regulations (NYCRR) 139: Control of the Asian Long Horned Beetle³
- 6 NYCRR 360: Solid Waste Management Facilities General Requirements⁴
- 6 NYCRR 361: Material Recovery Facilities⁵
- 6 NYCRR 361-3: Composting and Other Organics Recycling Facilities⁶
- 6 NYCRR 361-4: Mulch Processing Facilities⁷
- 6 NYCRR 361-5: Construction and Demolition Debris Handling and Recovery Facilities⁸
- 6 NYCRR 361-7: Metal Processing and Vehicle Dismantling Facilities⁹
- 6 NYCRR 362: Combustion, Thermal Treatment, Transfer, and Collection Facilities¹⁰
- 6 NYCRR 362-4: Household Hazardous Waste Collection Facilities and Events¹¹
- 6 NYCRR 364: Waste Transporters¹²

³ Thomson Reuters Westlaw. Part 139 Control of the Asian Long Horned Beetle. Accessible at [https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I561766d0ab3a11ddbd79a18800159157&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I561766d0ab3a11ddbd79a18800159157&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))

⁴ Ibid. Part 360 Solid Waste Management Facilities General Requirements. Accessible at [https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Ic884bcc0b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Ic884bcc0b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))

⁵ Ibid. Part 361 Material Recovery Facilities. Accessible at [https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Icfe9d780b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Icfe9d780b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))

⁶ Ibid. Part 361-3 Composting and Other Organics Recycling Facilities. Accessible at [https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I1674a0b0d90711e7b1b4dba4afbaec92&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I1674a0b0d90711e7b1b4dba4afbaec92&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))

⁷ Ibid. Part 361-4 Mulch Processing Facilities. Accessible at [https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I16a77080d90711e7b1b4dba4afbaec92&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I16a77080d90711e7b1b4dba4afbaec92&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))

⁸ Ibid. Part 361-5 Construction and Demolition Debris Handling and Recovery Facilities. Accessible at [https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I16b5a150d90711e7b1b4dba4afbaec92&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I16b5a150d90711e7b1b4dba4afbaec92&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))

⁹ Ibid. Part 361-7 Metal Processing and Vehicle Dismantling Facilities. Accessible at [https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I16cb4c30d90711e7b1b4dba4afbaec92&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I16cb4c30d90711e7b1b4dba4afbaec92&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))

¹⁰ Ibid. Part 362 Combustion, Thermal Treatment, Transfer, and Collection Facilities. Accessible at [https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Icf56a5e0b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Icf56a5e0b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))

¹¹ Ibid. Part 362-4 Household Hazardous Waste Collection Facilities and Events. Accessible at [https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Id8619b30d45a11e78486f898b5edec9f&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Id8619b30d45a11e78486f898b5edec9f&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))

¹² Ibid. Part 364 Waste Transporters. Accessible at [https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Icf87c800b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Icf87c800b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))



- 6 NYCRR 371: Identification and Listing of Hazardous Wastes¹³
- 6 NYCRR 374-3: Standards for Universal Wastes¹⁴
- 6 NYCRR 376: Land Disposal Restrictions¹⁵
- Consolidated Laws of New York, Agriculture and Markets, Article 26, Section 377: Disposal of Dead Animals¹⁶
- Consolidated Laws of New York, Environmental Conservation, Article 27, Title 3, Section 27-0305: Permits for waste transporters¹⁷
- Consolidated Laws of New York, Environmental Conservation, Article 27, Title 26: Electronic Equipment Recycling and Reuse¹⁸
- Consolidated Laws of New York, Environmental Conservation, Article 33: Pesticides¹⁹
- Consolidated Laws of New York, Environmental Conservation, Article 37, Title 1, Section 37-0109: Chromated copper arsenate pressure treated lumber; public facilities²⁰
- Consolidated Laws of New York, Executive, Article 2-B: State and Local Natural and Man-made Disaster Preparedness²¹

1.2.4 Federal

- Sandy Recovery Improvement Act 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, July 2012
- Title 2 Code of Federal Regulations, Part 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (2 Code of Federal Regulations (CFR) 200)

¹³ Ibid. Part 371 Identification and Listing of Hazardous Waste. Accessible at [https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Id10d5690b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Id10d5690b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))

¹⁴ Ibid. Part 374-3 Standards of Universal Wastes. Accessible at [https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Idceeb850b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Idceeb850b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))

¹⁵ Ibid. Part 376 Land Disposal Restrictions. Accessible at [https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Idf53d170b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=Idf53d170b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))

¹⁶ [Legislation | NY State Senate \(nysenate.gov\)](https://www.nysenate.gov/legislation)

¹⁷ [Consolidated Laws of New York | Title 3 - WASTE TRANSPORTER PERMITS | Casetext](#)

¹⁸ [Electronic Equipment Recycling and Reuse Act \(ny.gov\)](#)

¹⁹ [Consolidated Laws of New York | Article 33 - PESTICIDES | Casetext](#)

²⁰ [Legislation | NY State Senate \(nysenate.gov\)](https://www.nysenate.gov/legislation)

²¹ <https://law.justia.com/codes/new-york/2015/exc/article-2-b/>



- US Code, Title 42, Chapter 103, Comprehensive Environmental Response, Compensation, and Liability and Title III of Superfund Amendments and Reauthorization Act of 1986
- 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:

1.3.1 County

- Tompkins County “Comprehensive Emergency Management Plan (CEMP),” 2018
- Tompkins County “Tompkins County Hazard Mitigation Plan: 2021 Update,” 2021²²

1.3.2 State

- New York State Department of Environmental Conservation “Disaster Debris Management Planning Tool Kit for New York State Municipalities,” 2015²³
- New York State Disaster Preparedness Commission “New York State Comprehensive Emergency Management Plan Emergency Support Function Annex ESF #3 Public Works and Engineering,” 2020²⁴

1.3.3 Federal

- FEMA Comprehensive Preparedness Guide 101 Version 2²⁵
- FEMA Publication FP 104-009-2 – Public Assistance Program and Policy Guide, 2020²⁶
- FEMA Public Assistance Debris Monitoring Guide, March 2021²⁷
- FEMA 329 Debris Estimating Field Guide, September 2010²⁸

²² [Planning - Climate Adaptation | Tompkins County NY](#)

²³ [Disaster Debris Management Planning \(ny.gov\)](#)

²⁴ [NYS ESF 3 Annex](#)

²⁵ [Developing and Maintaining Emergency Operations Plans \(fema.gov\)](#)

²⁶ [Public Assistance Program and Policy Guide Version 4 \(fema.gov\)](#)

²⁷ [FEMA Debris Monitoring Guide \(March 2021\)](#)

²⁸ FEMA Debris Estimating Field Guide. Accessible at [fema 329 debris-estimating field-guide 9-1-2010.pdf](#)



- FEMA Public Assistance Alternative Procedures EMMIE Cost Codes for Debris Removal²⁹
- National Response Framework, Department of Homeland Security, Fourth Edition, October 2019³⁰
- FEMA Publication FD 008-03 – Pre-Disaster Recovery Planning Guide for Local Governments, February 2017³¹
- National Disaster Recovery Framework, Second Edition, Department of Homeland Security, June 2016³²
- U.S. Census 2010³³

1.4 Incidents and Assumptions

1.4.1 Population and Demographics

According to the U.S. Census Bureau’s 2018 5-year population estimates, the population of the County was 101,564. A language other than English is spoken at home in 12.9 percent of the population.³⁴ The majority of people who speak non-English languages at home speak Asian and Pacific Island languages, followed by Other Indo-European languages and Spanish. Due to the diversity of languages spoken, the County and its municipalities will need to ensure that debris management public information is available in multiple languages and in various accessible formats. In addition, 13.2 percent of the population is over the age of 65, and approximately 17 percent of the population lives in poverty.³⁵ During disasters such groups and other populations who typically face socio-economic barriers often have less access to resources and support. This situation should be considered when identifying support these groups may need in regard to debris management.

1.4.2 Physical Characteristics

Tompkins County includes one city, nine towns, six villages, and 31 hamlets, with a total land area of 474.6 square miles and a total water area of 16.9 square miles³⁶. At 94.2 square miles, the Town of Dryden is the largest geographic jurisdiction, equating to almost 20 percent of the total area of the County. The Town of Ithaca is the smallest town in Tompkins County, totaling 30.3 square miles, which represents only 6 percent of the total land area.

Tompkins County has a diverse terrain that is relatively gentle in the north. Terrain is more varied and higher in elevation and topographic relief in the south. Elevations range from approximately

²⁹ [Public Assistance Alternative Procedures Pilot Program - Debris Removal \(cdrmaguire.com\)](#)

³⁰ [National Response Framework \(fema.gov\)](#)

³¹ [Pre-Disaster Recovery Planning Guide for Local Governments \(fema.gov\)](#)

³² [National Disaster Recovery Framework, Second Edition \(fema.gov\)](#)

³³ [Explore Census Data](#)

³⁴ Tompkins County Hazard Mitigation Plan

³⁵ Ibid

³⁶ 2010 Census Gazetteer files, 2012



400 feet to greater than 2,000 feet above sea level³⁷. The highest topographic point in the County, Connecticut Hill, is located in the Town of Newfield, and reaches an elevation of 2,200 feet above sea level³⁷. The lowest elevation, recorded to be 382 feet above sea level, is the surface water level of Cayuga Lake³⁷.

Tompkins County’s topography is shaped by glacial features and uplifting geographic events that carved deep gorges now known as the Finger Lakes. Approximately 200 million years ago, drainage flowed south to the Susquehanna River instead of north to Lake Ontario³⁸. The new lakes changed the region’s drainage and provided the lifeblood for the area’s development³⁸. The geographic location of the County makes it susceptible to several types of incidents that could result in widespread disaster debris. Those events most likely to generate debris include floods, high winds, tornadoes, and other severe storm events.

1.4.3 Incident Description

This multi-hazard DMP is designed to address numerous debris-generating incident scenarios, as illustrated in Table 1-1.

Table 1-1. Debris-Generating Incidents³⁹

Hazard Type	Characteristics	Types of Debris
Earthquake	Ground motion for up to weeks at a time	Primarily structural debris from collapsed buildings
Flood – Flash Flood	High-velocity flows in drainage areas, not limited to floodplains	Mixed vegetative and structural debris
Flood - Riverine	Relatively low rise and fall of water from creeks and rivers	Mixed vegetative and structural debris, large amounts of sediment may be deposited
Hurricane	High velocity winds and large amounts of rain	Vegetation and structural debris from impacted buildings
Ice Storm	Accumulation of snow and ice on structures, utilities, and vegetation	Downed transmission lines; some structural debris from buildings that collapse (at least partially) from the weight of ice accumulation; widespread vegetation
Landslide	Sliding of earth and vegetation down a slope	Vegetation, structural debris from impacted homes and businesses
Terrorism	Varies widely depending on the nature of the attack	Structural debris from impacted buildings. This debris may include criminal evidence.
Tornado	Very high velocity winds	Vegetation and structural debris from impacted buildings

³⁷ Tompkins County Hazard Mitigation Plan 2014

³⁸ Tompkins County Comprehensive Plan 2015

³⁹ [Lesson 2: Debris Management Plan Overview \(fema.gov\)](#)



Hazard Type	Characteristics	Types of Debris
Wildfire	Extensive burns in vegetated areas	Primarily vegetative in Tompkins County; may include structural debris if buildings are impacted in the burn area

For the purposes of the DMP, the following two most likely scenarios have been developed based on maximum impact, ability to respond, and frequency of incident:

- **Scenario 1: 1 Percent Annual Chance Flood Event**

- This scenario is considered a *Low Probability – High Consequence* incident and focuses on catastrophic debris-generating incidents from serious flood events that may significantly impact the County and multiple municipalities. In this case, resources are severely strained throughout the entire region, and a Presidential Disaster Declaration for Category A Public Assistance (Debris Removal) is immediate or imminent due to the following:
 - Long-term impacts to roads and bridges are expected.
 - Various composition of debris, includes vegetative and construction and demolition (C&D) debris.
 - Post-incident debris estimates have the potential to exceed 55,000 cubic yards.

This event is similar to or larger than the flooding experienced in 2011 from the remnants of Tropical Storm Lee. The period for clean-up can last from a few days to one month. Depending on the severity of the incident, formal Debris Management Sites (DMS), as described in this plan, would likely need to be established.

- **Scenario 2: Severe Storm**

- This scenario is considered *High Probability – Medium Consequence* incident and is best described as a severe thunderstorm with high winds (65–110 miles per hour). The period for clean-up can last from a few days to one month. Depending on the severity of the incident, DMS locations may or may not be operational. In this case, the County and municipalities might choose to rely on local contractors or local government staff time without fully activating the DMP.
- This scenario focuses on those higher frequency debris-generating incidents that may impact municipalities throughout the County. These incidents may be characterized as those that **do not** immediately receive a Presidential Disaster Declaration for Category A, including the following:
 - Short-term impacts to structures, roads, bridges, and rail lines are expected
 - Composition of debris is primarily vegetative with limited C&D and white goods (White goods include refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, etc.).
 - Post-incident debris estimates do not approach or exceed jurisdictions’ capabilities to manage the debris.



1.5 Debris Volume Estimate

The debris volume generated by an incident will depend on the type of incident. For planning purposes, this DMP will be based on debris volumes generated by the **1 percent annual chance flood (Scenario 1)** utilizing the existing (as of January 2022) mapped Special Flood Hazard Areas. However, the guidance that follows in this plan will help to respond to the range of debris-generating incidents that could affect the County.

Tompkins County used the finish, structure, and foundation debris estimates provided by FEMA's Hazus-MH software during development of the *Tompkins County Hazard Mitigation Plan: 2021 Update*⁴⁰ to help clarify the volume of building debris that would be anticipated in a 1 percent annual chance flood. They are defined⁴¹ as follows:

- Finish – dry wall, flooring, insulation, etc.
- Structure – framing, walls, exterior cladding
- Foundation – concrete slab, concrete block, or other foundation

Because Hazus-MH does not provide vegetative debris quantities, the County supplemented this analysis by using the vegetative debris multiplier from FEMA's debris estimation formula for destroyed households to calculate vegetative debris. A vegetative cover multiplier of 1.1 was used for the County's villages and city, while a multiplier of 1.3 was used for the County's towns.

Using this methodology, Table 1-2 shows the estimated debris in each municipality that would be generated by the 1 percent annual chance flood⁴².

Table 1-2. Debris Estimates in Tons for the 1 Percent Annual Chance Flood

Municipality	Finish (tons)	Structure (tons)	Foundation (tons)	Vegetative (tons)	Total (tons)
Caroline (T)	119.7	91.1	72.9	52.6	336.3
Cayuga Heights (V)	-	-	-	126.1	126.1
Danby (T)	9.1	6.4	4.7	3.8	24.0
Dryden (T)	183.7	146.6	144.4	85.9	560.6
Dryden (V)	127.9	0.1	0.1	11.1	139.2
Enfield (T)	95.6	181.2	204.9	25.1	506.8
Freeville (V)	49.0	9.9	8.3	5.1	72.3
Groton (T)	311.2	319.4	289.8	160.6	1,081.0

⁴⁰ [Planning - Climate Adaptation | Tompkins County NY](#)

⁴¹ [Hazus Flood Model User Guidance \(fema.gov\)](#)

⁴² Estimates for the Village of Cayuga Heights are limited due to the current mapped floodplains in the village. The Town of Enfield does not participate in the National Flood Insurance Program, so there are no mapped floodplains in the town. The estimates for the Village of Cayuga Heights were developed using FEMA's Debris Estimating Guide for a community with homes averaging 2,900 square feet. The estimates for the Town of Enfield were developed based on the number of structures within 100 feet of a waterway or waterbody in the Town of Newfield, applying the ratio of the tons of debris in the Town of Newfield divided by the number of structures in the Town of Newfield to the number of structures in the Town of Enfield.



Municipality	Finish (tons)	Structure (tons)	Foundation (tons)	Vegetative (tons)	Total (tons)
Groton (V)	222.4	14.7	10.9	20.5	268.5
Ithaca (C)	6,349.1	1,710.2	1,544.4	693.6	10,297.3
Ithaca (T)	372.1	451.6	364.6	203.5	1,391.8
Lansing (T)	237.2	255.3	205.7	122.0	820.2
Lansing (V)	-	-	-	95.7	95.7
Newfield (T)	140.0	265.4	300.1	110.3	815.8
Trumansburg (V)	133.9	45.7	34.9	15.1	229.6
Ulysses (T)	75.3	55.1	45.4	32.8	208.6
Total	8,426.2	3,552.7	3,231.1	1,763.8	16,973.8

To determine the volume of the debris shown in Table 1-2, the following conversion factors were used:

- Construction and demolition debris (structure and foundation): 1 ton = 2 cubic yards
- Mixed debris (finish): 1 ton = 4 cubic yards
- Vegetative Debris:
 - Hardwoods: 1 ton = 4 cubic yards
 - Softwoods: 1 ton = 6 cubic yards
 - 70 percent of the forest in Tompkins County is hardwood, and 30 percent is softwood, so a blended conversion rate of 1 ton = 4.6 cubic yards was used.

Debris estimates by volume are shown in Table 1-3.

Table 1-3. Debris Estimates in Cubic Yards (CY) for the 1 Percent Annual Chance Flood

Municipality	Finish (CY)	Structure (CY)	Foundation (CY)	Vegetative (CY)	Total (CY)	Percent of Total Debris (%)
Caroline (T)	478.8	182.2	145.8	242.04	1,048.8	1.9
Cayuga Heights (V)	-	-	-	580.00	580.0	1.0
Danby (T)	36.4	12.8	9.4	17.58	76.2	0.1
Dryden (T)	734.8	293.2	288.8	395.04	1,711.8	3.1
Dryden (V)	511.6	0.2	0.2	51.20	563.2	1.0
Enfield (T)	382.4	362.4	409.8	115.5	1,270.1	2.2
Freeville (V)	196	19.8	16.6	23.24	255.6	0.5
Groton (T)	1,244.8	638.8	579.6	738.96	3,202.2	5.8
Groton (V)	889.6	29.4	21.8	94.08	1,034.9	1.9
Ithaca (C)	25,396.4	3,420.4	3,088.8	3,190.56	35,096.2	63.4
Ithaca (T)	1,488.4	903.2	729.2	936.24	4,057.0	7.3
Lansing (T)	948.8	510.6	411.4	561.24	2,432.0	4.4
Lansing (V)	-	-	-	440.0	440.0	0.8
Newfield (T)	560	530.8	600.2	507.30	2,198.3	4.0



Municipality	Finish (CY)	Structure (CY)	Foundation (CY)	Vegetative (CY)	Total (CY)	Percent of Total Debris (%)
Trumansburg (V)	535.6	91.4	69.8	69.68	766.5	1.4
Ulysses (T)	301.2	110.2	90.8	150.66	652.9	1.2
Total	33,704.8	7,105.4	6,462.2	8,113.3	55,385.7	100
Percent of Total Debris (%)	60.9	12.8	11.7	14.6	100	--

1.6 Local Resource Needs Assessment

Local resources, also known as force account resources, are County- or municipality-owned assets, including equipment and labor, that can be used to respond to a debris-generating incident. For relatively minor incidents, the County and municipalities can rely on their own resources to respond. For larger-scale incidents and disasters, including Scenario 1: The 1 Percent Annual Chance Flood, the demand for supplies and materials could quickly overwhelm the County’s assets and capabilities. In that case, jurisdictions may look to mutual aid resources, or rely upon contracted services to provide staffing, equipment, and expertise to help manage the debris. In the event of a large-scale disaster, the County and municipalities must assess the local labor pool and determine the need for additional response and recovery workers and other resources.

Table 1-4 provides resource requirements based on the debris estimates supplied above.

Assumptions regarding an event like Scenario 1, which requires the formalizing of a DMS, assumes the following

- Average on-road dump truck volume capacity is 5.7 cubic yards⁴³.
- Average on-road dump truck weight capacity is 11.8 tons⁴⁴.
- 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 (see Disposal Monitoring, below) will also be needed at the disposal site and DMS, if activated.
- Volume of debris that can be staged per acre is based on a 15-foot stack height: 24,200 cubic yard/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.

⁴³ The average volume and weight capacities for each municipality’s on-road dump trucks were determined for each municipality that reported their resources. However, few municipalities provided information on the resources they had available. As such, the City of Ithaca’s resources were used for the calculations for municipalities that did not report their resources.

⁴⁴ Ibid.



Total cubic yards of debris was calculated for each municipality. This calculation was then used to estimate the number of debris collection trips that would be required to haul that debris. Using the assumptions above, the number of operational days based on the trucks available (identified by each municipality) and the number of DMS acres for each municipality were calculated. Table 1-4 lists the debris resource requirements over the entire County and its municipalities.

Table 1-4. Debris Resource Requirements for Scenario 1: 1 Percent Annual Chance Flood Event

Municipality	Total Debris (Cubic Yards)	Debris Collection Trips*	On-Road Dump Trucks Available*	Operational Days	DMS Acres Needed	Collection Monitors Needed
Caroline (T)	1,048.8	184	NP	NP	5	-
Cayuga Heights (V)	580.0	102	-	-	5	-
Danby (T)	76.2	14	NP	NP	5	-
Dryden (T)	1,711.8	301	NP	NP	5	-
Dryden (V)	563.2	99	NP	NP	5	-
Enfield (T)	1,270.1	223	-	-	5	-
Freeville (V)	255.6	45	NP	NP	5	-
Groton (T)	3,202.2	562	NP	NP	5	-
Groton (V)	1,034.9	182	NP	NP	5	-
Ithaca (C)	35,096.2	6,158	24	43	5	24
Ithaca (T)	4,057.0	712	1	119	5	1
Lansing (T)	2,432.0	427	NP	NP	5	-
Lansing (V)	440.0	78	2	7	5	2
Newfield (T)	2,198.3	386	7	10	5	7
Trumansburg (V)	766.5	135	NP	NP	5	-
Ulysses (T)	652.9	115	NP	NP	5	-
Total	55,385.7	9,723	34	N/A	N/A⁺	N/A

* The number of trips and operational days were calculated based on the resources that each municipality reported as having available. A full list of available equipment, including that owned and/or operated by Tompkins County, is provided in Appendix A.

NP: Resource information was not provided, so the number of trucks, operational days, and monitors needed could not be calculated.

+The acreage required is based on the quantity of debris, with a 5-acre minimum. If any municipality operated its own DMS, 5 acres would be required. Based on the total amount of debris in the table above, only one 5-acre DMS would be required, so it would not be appropriate to sum the number of acres.



Section 2 Roles and Responsibilities

2.1 Debris Management Organization

To prevent duplication of efforts following a disaster incident, roles and responsibilities of key staff and County/municipal departments, as related to debris removal and management, must be clearly defined prior to a disaster. One of the key Pre-Event Debris Management Planning actions will be to identify who in the County would fulfil each of these roles. Based on severity of the incident, the County may establish a Debris Management Operations Center (DMOC) with its own organizational structure to coordinate debris management operations across the County. An organizational structure for local management of debris-generating incidents, based on FEMA’s Incident Command System (ICS), is depicted in Figure 2-1. The purpose of the organizational chart is to facilitate communication flow among local partners during the recovery phase of a disaster.

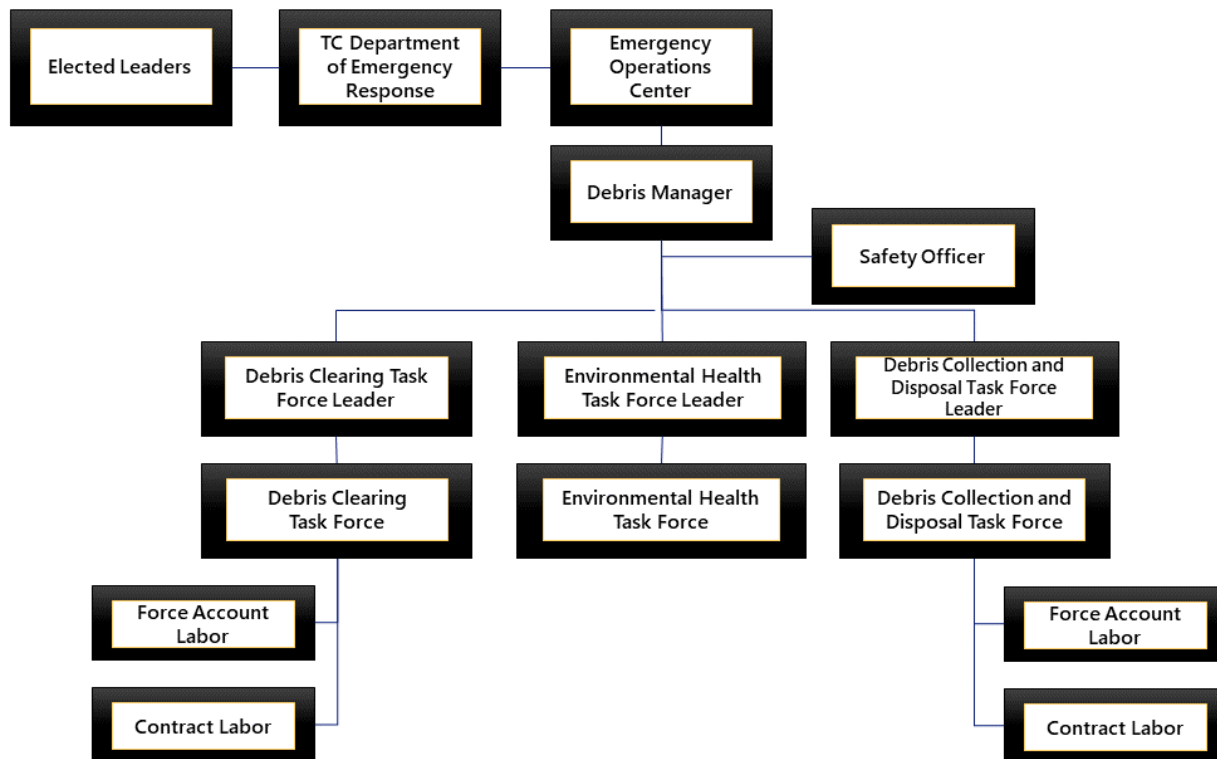


Figure 2-1: Debris Management Organizational Chart



2.2 Key Positions in Debris Management

Positions that could be needed for debris management operations – including clearing, collecting, and disposal – are described below. The level of staffing for response to a debris-generating incident will depend on the magnitude of the incident. Job action sheets for key debris management positions are provided in **Appendix B**.

2.2.1 Debris Manager

This staff member has overall responsibility for coordinating the debris management effort throughout the affected areas.

- Frequently, this position is held by the Director of Recycling and Materials Management or designee.
- Establish a DMOC, if it is deemed necessary.
- Activate staff for debris clearing and debris monitoring services.
- Establish the ICS for debris management operations.
- Coordinate with the Tompkins County Finance Department and municipal purchasing officials to activate staff and contractors for debris clearing and debris monitoring services.
- Establish priorities for debris management operations.
- Collaborate with federal, state, municipal, and other agency representatives.
- Provide updates to the Tompkins County Department of Emergency Response and the Emergency Operations Center regarding debris management operations.
- Review and approve public information messages regarding debris operations.
- Coordinate with the Tompkins County Finance Department and municipal finance staff in the tracking of debris management costs.
- Coordinate the demobilization of debris management operations.

2.2.2 Safety Officer

This staff member is responsible for ensuring that debris management operations are carried out safely. If this position is not specifically staffed, the responsibilities are held by the Debris Manager.

- Frequently this position is held by the County’s Health and Safety Officer, or designee.
- Create a safety plan in accordance with ICS requirements
- Ensure safety messages are developed and briefings are conducted.
- Exercise emergency authority to stop and prevent unsafe acts during debris operations.
- Revise Incident Action Plans for safety considerations.
- Investigate accidents and near misses.



- Participate in planning meetings.
- Review and approve the medical plan.

2.2.3 Debris Clearing Task Force Leader

This staff member is in charge of clearing debris from roads.

- Frequently this position is held by the County's Highway Director or designee.
- Oversee the Debris Clearing Task Force.
- Stage and prepare resources immediately prior to an expected incident to ensure these will be ready to activate in the event they are needed to clear debris off streets.
- Oversee clearing of County roads immediately following a debris-generating incident.
- Coordinate local and contract resources to clear streets of debris in accordance with established objectives and priorities.
- Coordinate with state officials to clear debris from state roads.
- Track progress of debris clearing operations.
- Provide regular updates to the Debris Manager regarding the status of operations.
- Coordinate with the Safety Officer to ensure debris clearing operations are conducted in a safe manner.
- Ensure all hours, expenses, and equipment use are accurately documented.

2.2.4 Debris Clearing Task Force

Staff on the Debris Clearing Task Force physically move debris from roads.

- Typically, this task force includes local public works crews, utility company staff, and contract workers.
- Coordinate through the Debris 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 Debris Clearing Task Force Leader.
- Track progress of the task force in debris clearing operations.
- Provide updates as required to the Debris Clearing Task Force Leader regarding status and progress of the task force.
- Obey health, safety, and environmental policies and follow health and safety guidance in conducting debris clearing operations.
- Ensure all hours, expenses, and equipment use are accurately documented.



2.2.5 Debris Collection and Disposal Task Force Leader

This staff member is in charge of collecting debris and transporting it to a DMS or other location for processing and final disposal.

- Frequently this position is held by the Deputy Director of Recycling and Materials Management or designee.
- Oversee the Debris Collection and Disposal Task Force
- Coordinate with County, local, and contract resources to stage and ready resources immediately prior to an expected incident to ensure these will be ready to activate in the event they are needed to collect debris.
- Coordinate with the Debris Monitoring staff 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 staff to conduct collection, DMS, and disposal site monitoring.
- Activate added DMS locations, as needed, in coordination with relevant departments and agencies.
- Coordinate with Environmental Health Task Force Leader 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, as well as waterway, parks, 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 staff.
- 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.

2.2.6 Debris Collection and Disposal Task Force

Members of this task force physically collect and transport debris.

- Frequently this task force includes local public works crews, utility company staff, and contract workers.
- 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, safety, and environmental policies and follow health and safety guidance in conducting debris clearing operations.
- Ensure all hours, expenses, and equipment use are accurately documented.

2.2.7 Environmental Health Task Force Leader

This staff member is responsible for ensuring that debris management operations follow environmental laws, regulations, and guidance, to protect the environment from impacts from debris management activities.

- Frequently this position is held by the County's Environmental Health Director or designee.
- Liaise with County, regional, state, and federal environmental agencies and staff 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 any applicable 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 Primary Organizations

The unique roles of County and municipal offices and departments associated with managing the debris clean-up process are summarized below. Additional roles and responsibilities for these and other organizations are described in the County's Comprehensive Emergency Management Plan (CEMP).



2.3.1 Tompkins County Department of Emergency Response

- Activate the Emergency Operations Center (EOC) and manage the EOC throughout response and recovery.
- Serve as the lead County department for coordinating debris management operations.
- Assign an individual to serve as the Debris Manager.
- Request needed resources through mutual aid agreements or from New York State Division of Homeland Security and Emergency Services.
- Review and update the DMP.
- 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.

2.3.2 Tompkins County Department of Recycling and Materials Management

- Coordinate the disposal of electronic waste.
- Coordinate the disposal of hazardous waste, including household hazardous waste (HHW)
- Coordinate the waste recycling programs in the County, including managing the appropriate disposal of electronic and hazardous waste. In a large-scale event, this may take place away from the County Transfer Station.
- Operate the County Transfer Station to collect and process applicable types of debris/waste under the NYS DEC permit conditions.

2.3.3 Tompkins County Highway Department

- Assign a staff member to represent Public Works in the County EOC.
- Coordinate with the County Department of Emergency Response to activate the DMP.
- Prioritize County roads 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.
- Coordinate with municipalities in the activation of Memoranda of Understanding (MOUs) for additional Public Works resources as needed.

2.3.4 Municipal Public Works/Highway Departments

- Serve as the lead municipal department for local debris management operations.
- Coordinate debris management with the County Department of Emergency Response.



- Prioritize roads for clearing debris.
- Implement debris clearing activities, coordinate department personnel, and coordinate with personnel from supporting agencies with a role in debris operations.
- Coordinate with other municipalities in the activation of MOUs for additional Public Works resources as needed.

2.3.5 Tompkins County Environmental Health Division

- Liaise with County, regional, state, and federal environmental agencies and staff 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 any applicable permitting of DMS locations.

2.3.6 Municipal Parks and Recreation Departments

- Assist in emergency roadway clearing activities as needed.
- Assist in debris removal operations as needed.
- Maintain right-of-way (ROW) mowing contracts.
- Oversee the clearance of debris from parks.
- Identify areas that can be used to store or manage debris.

2.4 Support Organizations

The unique roles of organizations that play a support role in managing debris in the County are summarized below. Additional roles and responsibilities for these and other organizations are described in the Tompkins County CEMP.

2.4.1 Tompkins County Department of Planning and Sustainability

- Assist in the assessment of environmental impacts from debris management operations.

2.4.2 Tompkins County Geographic Information System (GIS) Division

- Provide GIS mapping services to support debris management operations.

2.4.3 Tompkins County Health Department

- Conduct environmental assessments at DMS locations before and after using the location as a DMS.



- Identify and address public health concerns (e.g., lead-based paint, aquifer contamination).

2.4.4 Tompkins County Communications/Public Information Office

- Develop public information messages related to debris operations.
- Update websites with current information regarding debris management operations.
- Update and monitor social media (e.g., Facebook, Twitter, and Instagram) posts regarding debris operations.

2.4.5 County Finance Department

- Establish an account code for tracking debris management expenses.
- Coordinate with staff to ensure hours, expenses, and equipment use are tracked accurately.
- Coordinate with FEMA, Highway/Public Works, and emergency management staff regarding Project Worksheet development.

2.4.6 County and Municipal Law Enforcement Agencies

- Provide preliminary damage and blocked roads information to dispatch and the EOC.
- Report downed power lines and other hazards to dispatch and the EOC for coordination with utilities.

2.4.7 Fire Departments

- Provide preliminary damage and blocked roads information to dispatch and the EOC.
- Report downed power lines and other hazards to dispatch and the EOC for coordination with utilities.
- Work to secure the areas and contain HAZMAT spills. Request resources through the EOC.

2.4.8 Municipal Governments

- Work with County Finance to coordinate purchasing.
- Work with County Information to coordinate public messaging.
- Develop public information messages related to debris operations.
- Update websites with current information regarding debris management operations.
- Update and monitor social media (e.g., Facebook, Twitter, and Instagram) posts regarding debris operations.



2.4.9 Institutions of Higher Education – Cornell University, Ithaca College, and Tompkins Cortland Community College

- Coordinate with County and municipal personnel to implement debris collection and disposal, and to share resources as applicable.

2.5 Private Enterprise

2.5.1 Debris Hauling Firms

- 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 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 (see Section 3.7.2).
- Removal of hazardous stumps (see Appendix O).
- Remove white goods debris from the ROW (see Section 3.5.4.2).
- Coordinate the removal of HHW from the ROW (see Section 3.5.4.1).
- Coordinate derelict and abandoned vehicle removal (such as those likely processed outside of existing County Transfer Station).
- Remove animal carcasses from areas designated by the jurisdiction.
- Communicate status of operations and supply chains as well as challenges and timelines to local officials.

2.5.2 Contracted and Private Waste Haulers

- Coordinate with County and municipal personnel to implement trash collection, recycling and disposal, and to share resources as applicable. This is different than an established Debris Hauling Firm.

2.5.3 Debris Monitor 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 those involving waterway and private property.

2.6 Community Organizations

- Assist residents unable to bring debris to the ROW.
- Assist the County and municipalities in communicating instructions to populations with communication barriers.
- Work with the County and municipalities to repurpose waste/debris collected.

2.7 State Agencies

The unique roles of state agencies that support debris management in the County are summarized below. Additional roles and responsibilities for these and other organizations are described in the County and NYS CEMPs.

2.7.1 New York State Department of Environmental Conservation (NYS DEC)

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

2.7.2 New York State Department of Transportation (NYS DOT)

- Conduct emergency road clearing activities immediately after a debris-generating event and the first pass of debris removal on all state and federal roads.

2.7.3 New York State Parks, Recreation and Historic Preservation (NYS Parks)

- Assist in emergency roadway clearing activities.
- Assist in debris removal operations as needed.
- Maintain right-of-way mowing contracts.



- Oversee the clearance of debris from parks.
- Identify areas that can be used to store or manage debris.

2.8 Federal Agencies

2.8.1 Federal Emergency Management Agency (FEMA)

- Provide guidance to the County and municipalities regarding debris eligibility and the FEMA reimbursement process.
- Develop Public Assistance Project Worksheets for the County's and municipalities' debris clean-up operations.
- Oversee any private property clean-up, should there be a declaration.

2.8.2 Federal Highway Administration

- Fund debris clearance and removal on federal aid highways through the Federal Highway Administration Emergency Relief Program. This can be done for an incident that is 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 U.S. Department of Agriculture

- Provide assistance through the Farm Service Agency's Emergency Conservation Program for removing debris from farmland.
- Provide assistance through the Farm Service Agency's Emergency Forest Restoration Program for removing debris from forest land to establish a new stand for natural regeneration.
- Provide assistance through the Natural Resources Conservation Service's Emergency Watershed Protection Program. This is done 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

- 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

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



2.8.6 U.S. Fish and Wildlife Service

- Administer programs for the planning, development, maintenance, and coordination of wildlife resource conservation and rehabilitation.
- Provide guidance regarding rare, threatened or endangered (RTE) species that could be affected by debris operations.



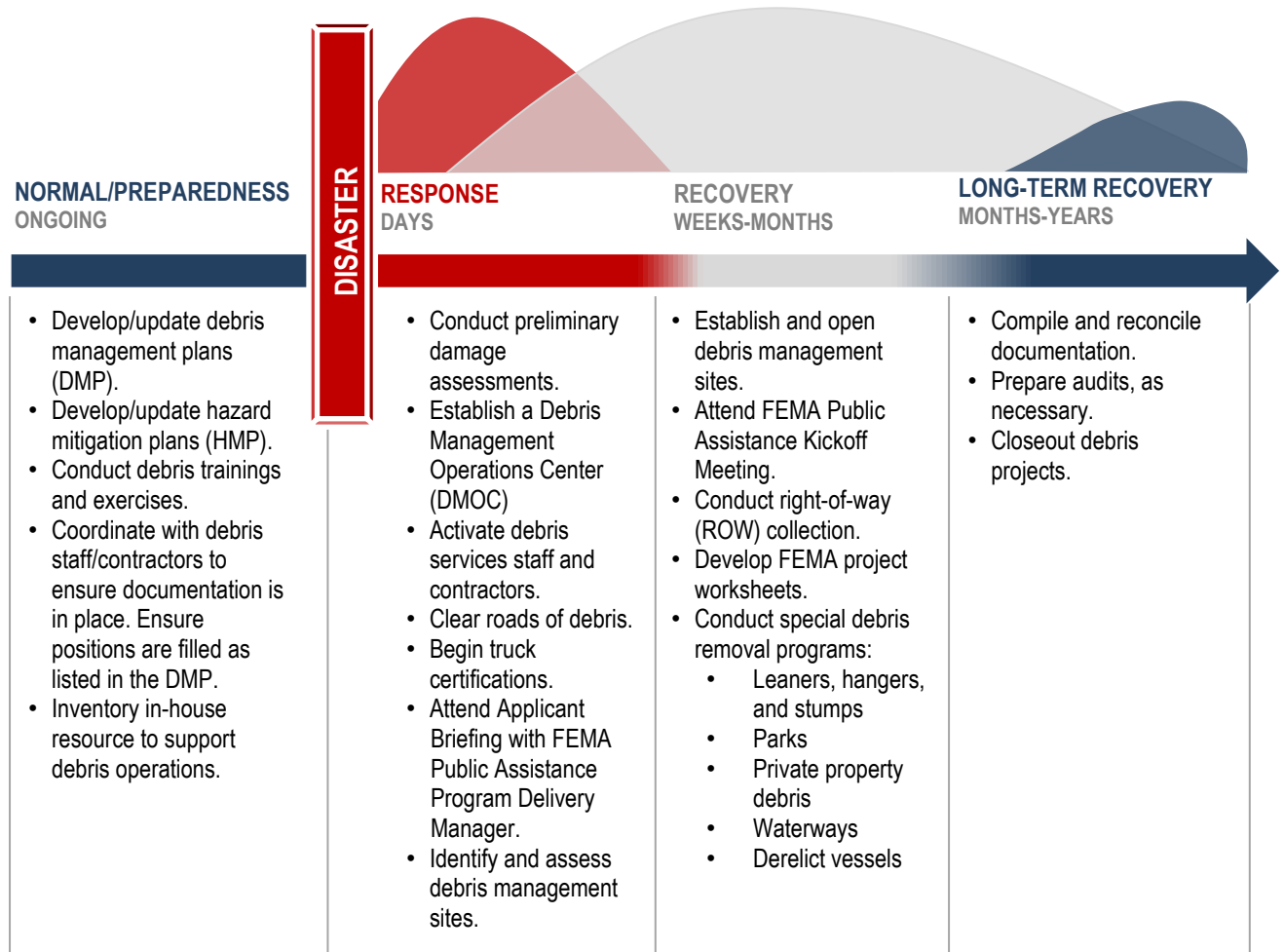
Section 3 Debris Collection and Removal Plan

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 C**. 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 County, municipalities, and stakeholders are not in any serious threat of a disaster incident.

The Normal Operations phase is the ideal time for the County and municipalities to advance the Action Strategy for debris management planning including:

- **Action #1: Formalize Debris Management Roles** – Set the roles and responsibilities of each department and other involved outside agencies as outlined in Section 2. This is done to ensure that all impacted departments, municipalities, and external agencies maintain the capacity to manage debris in a timely and effective manner should a disaster strike the County or its municipalities.
- **Action #2: Review Debris Management Contracts** - Establish and review pre-positioned contracts with monitoring firms and debris removal contractors^{45, 46}.
- **Action #3: Establish Reserve Fund** - Establish fund to help facilitate costs that would need to be incurred by the County at the start of an active debris generating event.
- **Action #4: Assess Debris Managements Sites** – Assess, organize and map ideal debris management sites including locations outside of the Special Flood Hazard Area.
- **Action #5: Analyze Debris Management Sites Equipment and Infrastructure** – After identifying DMS locations, identify any equipment that should be acquired, or infrastructure improvements that should be made, to assist with larger scale debris management.

To help prepare for potential debris generating events it is recommended that the County review and update its debris management plan prior to severe weather season (generally prior to Fall). To further assist with this, it is recommended that the County coordinate a pre-season kickoff meeting between the County, municipalities, and their pre-positioned monitoring and debris removal staff/contractors, if possible. Such a meeting could be done in concert with the annual hazard mitigation plan implementation and update meetings, or as a part of an emergency operations planning meeting.

⁴⁵ During times of normalcy, the County and its municipalities will establish and maintain pre-positioned contracts for debris monitoring and debris removal services. The procurement of such services will be compliant with the County's and municipalities' 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. County and municipal representatives should be familiar with 2 CFR Super Circular as part of the federal contracting requirements to receive federal awards .

⁴⁶ Appendix D provides additional guidelines regarding contracting. Appendix E consists of a sample scope of work to aid in the evaluation and selection of debris removal contractors. Appendix F identifies contractors that have been pre-positioned by the County and/or its municipalities.



3.2 Pre-Incident Preparation

The County and municipalities will begin pre-incident preparations when a potential debris-generating hazard is moving toward the region. However, because of the short notice nature of most incidents that could affect the County and municipalities, the opportunity to make pre-incident preparations is often limited.

If it is feasible to employ pre-incident preparations, key County and municipal personnel and outside agencies should be put on alert and maintain awareness that they may be required to work extended hours in adverse conditions.

The Pre-Incident Checklist is provided in **Appendix C**.

3.2.1 Preparing Debris Management Site Locations

The availability of pre-selected/pre-approved DMS locations will be evaluated in greater depth by the Department of Recycling and Materials Management, Assessment Department, and the Department of Emergency Response. Initial research indicates the County's former Caswell Landfill site in the Town of Dryden, among other sites, could serve favorably as a DMS. A list of other potential DMS locations can be found in **Appendix G**. Alternate locations will be considered by prioritizing potential alternate sites if one or more pre-approved sites are not available. A sample MOU for use in establishing agreements with private landowners for use of their property for DMS, if needed, can be found in **Appendix H**. It is recommended that these agreements be prepared, but not ratified, until a location for DMS is needed.

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. This messaging would need to be structured in multiple languages and formats to inform all County residents as noted in Section 1.4.1. The message should assure the public that the County and municipalities are prepared and have a plan in place to immediately respond to an incident. The message should include information on County and municipal office closure times/dates, including information regarding garbage collection and County/municipal facilities. In addition, the County and municipalities will need to provide information on proper set-out procedures and estimates on when the clean-up process will begin through a variety of communications formats and media. 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. Road debris will be managed by functional class (i.e., urban arterial-freeways, urban/rural arterials, urban/rural collectors, urban streets and rural local roads). It is critical that all types of equipment and the amount of time the equipment is used are documented with detail and accuracy in order to



increase the chances that incurred costs are reimbursable. The reimbursement criteria and duration for time and materials work are subject to change following a disaster.

3.3.1 Conduct Damage Assessment

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

3.3.2 Establish a Debris Management Operations Center (DMOC)

To effectively manage debris operations, a DMOC may need to be established. From the DMOC, key strategies and functions of debris management operations will be coordinated in collaboration with County and municipal departments with a role in debris management as well as the debris monitor and debris hauler. The DMOC will 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. As the department that would staff the Debris Manager, the Department of Recycling and Materials Management will provide the necessary staffing and/or contractor support to operate the DMOC. A County staff member will be selected to serve as the Debris Manager to lead County and municipal debris operations and direct DMOC activities. The responsibilities of the Debris Manager are listed in Section 2.2.1 of this plan.

3.3.3 Activate Monitoring and Debris Removal Staff/Contractors

The Debris Manager, working in coordination with Department of Emergency Response and County and municipal leadership, will use the damage assessments to determine whether or not to activate debris monitoring and removal staff or contractors. When the monitoring and debris removal staff/contractors are activated, each staff would need to review an updated street list found in **Appendix J**, debris collection zone maps found in **Appendix K**, and the Health and Safety Strategy found in **Appendix L**. The monitoring and debris removal staff will begin logistical coordination and equipment ramp-up immediately upon being activated.

Monitoring Function

Upon activation, the monitoring staff supports truck certification, collection, and disposal monitoring functions. The County will orient employees with operational procedures and refresh staff with the field training program on current debris removal eligibility, FEMA requirements, County and municipal 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 would need to 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 Function

Upon activation, the Debris Manager mobilizes a contracted service provider to coordinate staff and equipment to the incident location. Equipment will be certified as required by the monitoring staff. DMS locations, site preparation, including logistical setup and tower construction, will begin. The County will orient staff and contractors with operational procedures and refresh staff with current debris removal eligibility, FEMA requirements, County and municipal debris removal contract requirements, and safety procedures.

3.3.4 Begin Emergency Roadway Debris Clearance

The County and municipalities will commence with road clearance or “cut and toss” activities. These operations would first focus on major arterials leading to storm shelters, hospitals, fire stations, police stations, supply points, and other critical facilities throughout the County. A list of priority roads for the County and municipalities, based on the presence of critical facilities, can be found in **Appendix J**. Roads are also prioritized by functional road classification. A list of force account equipment that can be used for road clearing and debris collections can be found in **Appendix A**.

3.3.5 Begin Truck Certification

Truck certification is the most important function in initiating a debris removal operation for both safety and reimbursement potential. Accuracy and documentation of all measurements is critical. All trucks hauling debris under volumetric contracts with the County or municipalities must have their capacity and dimensions measured, photographed, and documented on a truck certification form. The debris monitoring staff can conduct truck certification services. **Appendix M** provides 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 will contain:

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



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

3.3.6 Prepare Debris Management Sites Based on Concentration of Debris

The Debris Manager, the monitoring staff, and debris removal staff will meet to discuss the opening and operation of pre-identified DMS locations. Before DMS preparation begins, the County and/or municipalities will obtain DMS approval from NYS DEC. The following items will need to be considered 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 County – Depending on the type of event, DMS locations may need to be activated in each affected municipality.
- Season

Some pre-identified potential DMS locations are listed in **Appendix G** 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 first choice for vegetative debris reduction.
- **Incineration** – The open burning of vegetative debris requires approval from local Fire Departments and the NYS DEC due to air quality concerns. The burning of vegetative debris typically results in a reduction ratio of 20:1. The leftover ash could be hauled to a final disposal facility or be incorporated in a land application. This method should generally be avoided in Tompkins County.
- **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 that the mulch be as clean as possible of plastics and dirt.
- **Metals** – Metal debris, including white goods (such as ovens and washing machines), as well as aluminum screened porches, can be recycled. Certain metals, such as aluminum and copper, are highly valuable to scrap metal dealers.
- **Concrete** – Concrete, asphalt, and other masonry products can be crushed and potentially used for road construction projects, or as trench backfill.

Appendix F 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 staff can begin site preparation. As part of the preparation, baseline data will need to 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, dated photos will 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 will be kept detailing the physical layout and features of the site. Items such as existing structures, fences, and landscaping should be documented in detail.
- **Historic Evaluation** – The past use of the site area will be researched and documented. Issues relating to historic or archeological significance of the site will need to be cleared with the state historic 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 would be analyzed for total Resource Conservation and Recovery Act metals, volatile organic compounds, and semi-volatile organic compounds using approved U.S. Environmental Protection Agency (EPA) methods.

The Debris Manager and monitoring staff will oversee the debris removal staff's activities to ensure that they follow their obligations, meet environmental standards, and act in the best interest of the County, municipalities, and residents. NYS DEC will be contacted to provide final approval under an emergency declaration for the DMS locations.

If a single DMS is used to process debris from more than one municipality, each municipality must have its own separate space for processing debris. **Commingling debris from multiple municipalities may result in the inability to accurately track debris management operations undertaken by each municipality, which will then affect the possible reimbursement of the County and municipalities for debris management activities under FEMA's Public**



Assistance program following a federally declared disaster. Municipalities would need to plan for specialized waste tracking accordingly.

Disposal Monitoring

The primary function of the monitoring staff 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 checks on all load tickets and haul-out tickets to ensure that information captured by collection monitors is complete. This process includes the following steps:

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

The Disposal Monitor will document the amount of debris collected by making a judgment 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 is tasked with the following responsibilities:

- 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.
- Ensuring only debris specified within the County's or municipality's scope of work is collected.

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

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

3.3.7 Conduct Meetings/Briefings with Key Personnel

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

Daily meetings should be held each morning at a location determined by the County/municipalities and include key personnel from the County/municipalities, monitoring staff, and debris removal staff. 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 County



and municipalities will review real time statistics and completion maps that reflect operations through the end of the previous day.

3.3.8 Review Debris Volume and Collection Cost Assessment

The County's/municipality's Debris Manager, monitoring staff, and debris removal staff will meet to review the debris volume and collection cost assessment. The topics of discussion in this meeting may include the following:

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

Following this meeting, the County/municipality and/or monitoring staff will collect required documentation for the development of FEMA Project Worksheets.

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

The County Department of Emergency Response will **immediately** request, through the NYS Division of Homeland Security and Emergency Services, a meeting with the designated FEMA Public Assistance Program Delivery Manager for the disaster. During this meeting, the County will provide the following actions:

- Summarize the debris removal operations in the County to date.
- Review debris and cost estimates for the County/municipalities.
- Review any Disaster-Specific Guidance (DSG) documents issued by FEMA.
- Examine the County's debris removal plan.
- Provide contact information for all monitoring and debris removal staff and key personnel.
- Determine additional information the Public Assistance Program Delivery Manager will need to generate Project Worksheets for the County or municipalities. To generate a Category A, debris removal, and debris monitoring Project Worksheet, FEMA will require the following information:
 - Copy of any debris removal contractor's contract(s).
 - Copy of any debris monitoring firm's contract(s).
 - Information about 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 U.S. Army Corps of Engineers model and damage assessment reports).
- Monitoring cost estimate (based on budgeted labor hours).
- Brief debris removal plan overview.

3.3.10 Public Information Post-Incident

A press release and public information campaign through various formats will be issued to various media sources. This release should be posted to the County and municipal websites as well as the County and municipal social media sites within the first three days following the debris-generating incident. Care should be taken to adapt diverse communication methods to best reach residents in both the urban and rural parts of the County. The content of the press release will be to reassure and comfort the public that the County and municipalities are responding to the incident and have activated the monitoring and debris removal staff/contractor to begin debris removal activities. Sample press releases are located in **Appendix I**.

3.4 Post-Incident Recovery

For the purpose of debris management, the post-incident recovery phase is marked by the debris removal staff collecting and reducing debris from the public ROW and associated infrastructure, such as bridges and culverts.

Concurrent to the commencement of ROW debris removal operations, the County and municipalities will evaluate the need for contract debris removal on private property and parks. 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 County or municipalities determine 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 included in **Appendix C**. 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 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.

3.5.1 Open Debris Management Sites

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

3.5.2 Prioritize Roads/Areas

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

3.5.3 Issue Press Release Regarding Segregation of Debris

Issue second press release regarding segregation of vegetative, C&D, white goods, electronics, HHW, and household garbage. Communication will provide reminders of inappropriate and illegal methods of disposal, including the burning of trash. Additional information can be found in **Appendix I**.

3.5.4 Begin ROW Debris Removal

The County and municipalities will direct the debris removal staff/contractors to proceed with curbside collection. Curbside collection entails residents piling their disaster-related debris along the ROW. Residents should segregate their debris in categories (e.g., vegetative, C&D, HHW, electronics, and white goods) to prevent the contamination of debris loads and expedite the clean-up process. To assist the County and municipalities in an "all-hazards approach" to debris removal efforts, the critical processes for HHW, white goods debris, vegetative debris, and electronic waste removal are outlined below.



3.5.4.1 HHW Debris Removal

HHW includes gasoline cans, aerosol spray cans, paint, lawn chemicals, batteries, fire extinguishers, fluorescent lamps, household electronics, etc. In a large-scale event, the management of HHW may very well occur away from the County Transfer Station.

HHW removal is eligible for FEMA reimbursement if the HHW is a result of the debris-generating incident and removed from publicly maintained property and roadways whose maintenance is the responsibility of the County or municipalities. Existing County contracts with HHW processing firms (currently Clean Harbors) may be able to assist with the process of safe HHW management. HHW may 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 County and municipalities will take the following steps regarding HHW removal:

- Communicate to 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 staff and the monitoring staff to identify, segregate, and dispose of intermingled HHW at DMS locations.
- Interface with the NYS DEC. Describe the HHW collection program and permitted facilities to be used for disposal or recycling.

3.5.4.2 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. It further needs to be removed from publicly maintained property and roadways whose maintenance is the responsibility of the County or municipalities. 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 will need to be carefully 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 County and municipalities will take the following steps regarding 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 NYS DEC. Describe the white goods collection program and permitted facilities to be used for disposal of recovered refrigerants, mercury, or compressor oils.



3.5.4.3 Vegetative Debris

Vegetative debris consists of whole trees, stumps, trunks, branches, and other leafy material. Depending on the size of the debris, collection 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 residents. The County and municipalities will determine the number of times debris is collected before normal collection activities are resumed. The County will consult with FEMA on behalf of the municipalities 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 can be collected from ROWs 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 (cubic yards).

3.5.4.4 Electronic Waste

Electronic waste (e-waste) includes televisions, desktop and laptop computers, computer attachments, stereo equipment, tablets, cell phones, and other electronic devices.⁴⁷ This material is banned from landfills in New York State.

E-waste debris removal is also 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 County or municipalities.

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.⁴⁸ There are organizations that can accept e-waste for recycling. Resources for e-waste can be found in **Appendix F** of this plan and at the Tompkins County Department of Recycling and Materials Management website⁴⁹.

3.5.4.5 Load Tickets

For the debris categories outlined above, pre-printed load tickets will be used as reimbursement documentation for the County and municipalities. 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 a DMS at the beginning

⁴⁷ Planning for Natural Disaster Debris, EPA, April 2019

⁴⁸ Ibid

⁴⁹ Tompkins County Recycling and Materials Management Disposal Resource. Accessible at <https://recycletompkins.org/whatdoidowith/>



of each load. The address field will be completed when the debris removal staff has completed work. The Collection Monitor will ensure the debris removal staff is working within the scope of their assignments from the County/municipality. 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 total amount of debris collected.

3.5.5 Perform Parks Damage Assessment

The municipal parks and recreation departments and monitoring staff must identify vegetative hazards that require removal within parks. Current eligibility criteria include:

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

Management of debris in State Parks is carried out by the NYS Parks, Recreation, and Historic Preservation Department (NYS Parks). Park Managers for each of the area State Parks serve as the leads for debris management in each Park.

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 County, municipalities, and their monitoring and debris removal staff/contractors to be fully cognizant of all DSG.

3.5.6 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 can be compared to previous data to establish any remediation actions necessary to return the site to its original state. The following items will need to 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.



3.5.7 Coordinate with External Agencies

The County/municipalities will coordinate with each other, NYS DOT, NYS DEC and other relevant agencies to ensure all County and municipal road segments are moving forward with debris removal operations. NYS DOT is responsible for emergency road clearing activities and first pass debris removal on all state and federal roads within the County. NYS DEC would likely be involved with debris removal on waterways though is dependent on location, ownership and if permits are needed for removal of debris. Coordination would need to occur with FEMA Region 7 post-hazard event.

3.5.8 Initiate Discussions with FEMA

Debris Managers and monitoring staff must 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.

3.5.9 Obtain FEMA Guidance for Gated Community and Private Property Debris Removal

Eligibility of gated community (e.g., Cardamone Townhomes - the only one in Tompkins County as of the time of this plan) 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 Public Assistance Program guidelines, the County and municipalities 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 County or municipalities, as applicable, must submit a written request to the FEMA Federal Coordinating Officer before removal operations begin. The request will include the following information:

- **Immediate Threat Determination** – The County/municipality must provide documentation from the NYS Department of Health and County Health Department that debris on private property is a threat to public health and safety.
- **Documentation of Legal Responsibility** – The County/municipality must demonstrate that it has the legal authority to enter private property and gated communities, and it accepts the responsibility to abate all hazards, regardless of whether or not a federal disaster declaration is made.
- **Indemnification** – The County/municipality applying for federal reimbursement 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 County/municipality, the following documentation will be required by FEMA:

- **Right-of-Entry and Hold Harmless Agreements** – The County/municipality will execute signed right-of-entry and hold harmless agreement documents with private property



owners holding the federal government harmless from any damages caused to private property. A sample right-of-entry/hold harmless agreement is included in **Appendix N**. The County/municipality may execute right-of-entry and hold harmless agreement forms prior to a disaster under the condition that these documents do not reference a particular incident or disaster number. The sample right-of-entry/hold harmless agreement provides a stipulation that the property owner will report to the County/municipality 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 County/municipality in recouping the costs of debris removal from private property.

- **Photos** – It is in the interest of the County/municipality 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 regular meetings with FEMA.
- Begin debris removal from private property and gated communities.
- Communicate project close-out to residents through various formats.

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 monitoring staff and provided to the County/municipality on a daily basis. To ensure proper record keeping and reimbursement from all appropriate agencies, it is important for the County and municipalities to announce the completion of the first pass of debris collection through the same channels that collections were announced.

3.6.2 Begin ROW Stump Removal as Necessary

Following initial ROW debris removal efforts, the County/municipality and monitoring staff 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**. 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.
- Extraction is required as part of the removal.

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 will need to be applied to any additional DMS.

3.6.4 Continue Regular Meetings with FEMA

It is critical that the County and municipalities maintain strong communication with their assigned FEMA representatives. Regular meetings help to ensure maximum coordination and 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 will begin upon approval.

3.6.6 Public Information Post-Incident Recovery

The project close-out press release and outreach campaign 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 monitoring staff and provided to the County and municipalities on a daily basis. During this period, the County and municipalities will need to announce the completion of the second pass through the same channels and establish a deadline for residents to set out debris on the ROW, as well as a deadline for the County's and municipalities' debris removal staff/contractors 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 County's and municipalities' debris removal staff/contractors may require lead time to transport specialty vehicles, equipment, and labor force to commence leaner/hanger work. Currently, FEMA Publication 104-009-2, version 4, 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 exhibits one of the following:

- Has a split trunk.
- Has a broken canopy.
- 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 all of the following criteria are met:

- The limbs or branches extend over the public ROW.
- The limbs or branches pose an immediate threat.
- The County/municipality applying for reimbursement 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 F**. Generally, for final disposal purposes, the most environmentally responsible and cost-effective method is for the County and municipalities to recycle reduced debris. Any remaining reduced debris that cannot be recycled would need to be disposed of at permitted landfills with consideration to the cost structure of associated tipping fees.

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

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 staff/contractors will identify and remove all remaining eligible debris piles.

3.8.2 Identify Ineligible Debris on ROW

Once ineligible debris on the ROW is identified, the County and municipalities will proceed in one of two ways:

- Holding individual private property owners responsible for the disposal of ineligible debris.
- Using internal equipment for disposal of the ineligible debris.
- Tasking the debris removal staff/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.



3.8.3 Complete the Disposal of Reduced Debris

Before project closure, remaining reduced debris at a DMS will need to be recycled or hauled to a landfill for final disposal, and, as appropriate, work with NYS DEC to post a closure plan. **Appendix F** provides locations of landfills.

3.8.4 Close-Out and Remediate Debris Management Sites

NYS DEC 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 remediating any contamination that may have occurred during operations. A final sample of environmental data will need to be collected to ensure the site is returned to its original state. Final closure of the DMS will require written notice to NYS DEC. The results of any required environmental samples will be included with the written notice.

3.8.5 Conduct Project Close-Out Meetings with FEMA and External Agencies

Prior to the project close-out meeting, the County and municipalities will receive detailed data from the monitoring staff regarding their debris removal operations. The County/municipalities, in conjunction with the monitoring staff, will compile all labor records, 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

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

4.1 New York State Regulatory and Technical Assistance

4.1.1 NYS DEC

NYS DEC 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. NYS DEC is also responsible for the New York State Materials Management Program to carry out the requirements of NYCRR Part 360, which is administered on a regional basis. NYS DEC has developed guidance⁵⁰ available on their Storm Debris Management Guidelines website.

4.1.2 New York State Department of Labor Asbestos Control Bureau

The Asbestos Control Bureau within the New York State Department of Labor is tasked with enforcing asbestos regulations in the State of New York.

4.1.3 NYS DOT

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

4.2 Federal Regulations and Guidance

4.2.1 Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act)

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

⁵⁰ New York State DEC – Storm Debris Management Guidelines. Accessible at <https://www.dec.ny.gov/regulations/8751.html>



- 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.
- Defines the minimum federal cost-sharing levels.

4.2.2 CFR Title 44 – Emergency Management and Assistance

Procedural requirements for the Public Assistance 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 program and outline procedures, eligibility, and funding.

4.2.3 FEMA Publication FP 104-009-2 – Public Assistance Program and Policy Guide 2020

The Public Assistance Program and Policy Guide⁵¹ overviews the protocols for accessing FEMA’s Public Assistance Program immediately following a disaster. This guidance document describes which entities are eligible for reimbursement under the federal/local cost-sharing program, the documentation necessary to ensure reimbursement, and special considerations about which local governments should be aware to maximize eligible activities.

4.2.4 Disaster-Specific Guidance (DSG)

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.

4.2.5 Sandy Recovery Improvement Act 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.

⁵¹ FEMA Public Assistance Program and Policy Guide. Accessible at https://www.fema.gov/sites/default/files/documents/fema_pappg-v4-updated-links_policy_6-1-2020.pdf



- Allows Public Assistance 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 Public Assistance Program.

4.2.6 CFR Title 2 CFR Part 200 – Administrative Requirements

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

4.2.7 The Disaster Recovery Reform Act of 2018

The Disaster Recovery Reform Act was signed into law in October 2018. The reforms made by this law acknowledge that the responsibility for disaster response and recovery is shared among many governments and non-governmental stakeholders, 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 Disaster Recovery Reform Act 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 government. It also requires FEMA to reimburse Public Assistance management costs by up to 12 percent (7 percent for the recipient and 5 percent for the subrecipient) of the total award amount.

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

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

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 Public Assistance, specifically the estimated cost of assistance (i.e., the per capita indicator).

Section 1235 – Additional Mitigation Activities (a – b)

- a. **Public Assistance 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 the work is undertaken in a manner that allows them to be resilient.



- Interim Policy⁵² was published in December 2019.
- Frequently Asked Questions (FAQ)⁵³ was published in February 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](#)⁵⁴.

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 Field Manual⁵⁵ was last updated in October 2019.

Section 1216 Section (c) – Statute of Limitations

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

4.2.8 National Environmental Policy Act

National Environmental Policy Act regulations can be found in 40 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 National Environmental Policy Act requirements and provides a decision-making process that FEMA must follow to fund a project.

4.2.9 Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act⁵⁶ governs the disposal of solid waste and hazardous waste. The act provides planners with greater awareness of environmental considerations and regulations for dealing with disaster debris.

4.2.10 National Historic Preservation Act

In conducting debris operations, the County and municipalities 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

⁵² Disaster Recovery Act – Section 1235(b) Consensus-Based Codes and Standards. Accessible at <https://www.fema.gov/assistance/public/policy-guidance-fact-sheets/section-1235b-consensus-based-codes-and-standards>

⁵³ Disaster Recovery Act – Section 1235(b) Consensus-Based Codes and Standards FAQs. Accessible at https://www.fema.gov/sites/default/files/2020-07/fema_DRRRA-1235b-public-assistance-codes-standards-faqs.pdf

⁵⁴ FEMA Post-disaster Building Safety Evaluation Guidance. Accessible at https://www.fema.gov/sites/default/files/2020-07/fema_p-2055_post-disaster_buildingsafety_evaluation_2019.pdf

⁵⁵ FEMA Procurement Disaster Assistance Field Manual. Accessible at https://www.fema.gov/sites/default/files/2020-07/fema_procurement-disaster-assistance-PDAT_field-manual.pdf

⁵⁶ Resource Conservation and Recovery Act (RCRA) Laws and Regulations. Accessible at <http://www.epa.gov/rcra>



inclusion in the National Register of Historic Places. Section 106 of the National Historic Preservation Act requires FEMA to consider how a project might affect such properties.

4.2.11 Endangered Species Act

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

4.2.12 Clean Water Act

The Clean Water Act provides regulations for the discharges of pollutants in the waters of the United States. According to the act, it is unlawful to discharge any pollutant from a specific source into navigable waters without the appropriate Clean Water Act permits from the U.S. Army Corps of Engineers or NYS DEC.

4.2.13 Clean Air Act

The Clean Air Act 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.

4.2.14 National Emission Standard for Hazardous Air Pollutants

The National Emission Standard for Hazardous Air Pollutants regulates the demolition of structures containing asbestos as well as the disposal and reporting of asbestos. The Asbestos Control Bureau within the New York State Department of Labor is tasked with enforcing asbestos regulations in the State of New York.

4.2.15 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.

4.2.16 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.

4.2.17 EPA Publication EPA 530-F-19-003, Planning for Natural Disaster Debris 2019

The Planning for Natural Disaster Debris publication discusses management of debris from natural disasters such as hurricanes, earthquakes, tornadoes, floods, wildfires, and winter storms. Designed to assist planners in the beginning stages of the planning process or in revising an existing DMP, it promotes greater awareness of environmental protection when dealing with disaster debris.



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



Section 5 Administration and Logistics

Staff from the County and municipalities, 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.



Section 6 Plan Maintenance

To maintain viability, the DMP would be updated annually, and personnel will be trained on the content prior to a disaster. FEMA updates debris operations program guidance throughout the year based on lessons learned from recent disasters; therefore, the County and municipalities must review the most recent guidance and incorporate those changes into the plan. This section explains the actions the County will take to ensure the plan is current and relevant. The maintenance of the DMP should be done in concert with updates to the CEMP and will coordinate with other County departments and municipalities to conduct maintenance activities.

6.1 Plan Review and Approval

The Department of Emergency Response will conduct an annual review of the DMP. 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.

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.

6.2 Training for Personnel

The County will institute the following training for personnel with responsibilities in debris management.

6.2.1 General

Personnel must be trained to ensure they are prepared to fulfill their role in a debris-generating emergency, including the following requirements:

- Personnel will be trained in their specific roles and responsibilities.
- Personnel will be trained in the Incident Command System 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 Public Assistance Program.
- Personnel will be trained to operate any equipment they are responsible for competently and safely.

6.2.2 Debris Managers

Debris Managers would be trained in the regulatory requirements for debris operations, including:

- Health and safety
- Environmental and historical preservation
- Procurement
- Federal disaster grant programs
- Considerations for individuals with disabilities and access and functional needs
- Damage assessment for debris

6.2.3 Finance and Administration

County and municipal finance and administration staff, including those filling that role in the EOC and/or DMOC, would need to be trained in regulatory requirements for debris operations, including:

- Procurement
- Federal disaster grant program
- Documentation needed for reimbursement of expenses.

6.3 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 County and municipalities 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.



Acronyms and Definitions

Acronyms

C&D	Construction and Demolition
CEMP	Comprehensive Emergency Management Plan
CFR	Code of Federal Regulations
DEC	Department of Environmental Conservation
DMOC	Debris Management Operations Center
DMP	Debris Management Plan
DMS	Debris Management Site
DOT	Department of Transportation
DSG	Disaster-Specific Guidance
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
E-Waste	Electronic Waste
FEMA	Federal Emergency Management Agency
GIS	Geographic Information Systems
GPS	Global Positioning System
HAZMAT	Hazardous Materials
Hazus-MH	Hazards U.S. – Multi-hazard software system
HHW	Household Hazardous Waste
MOUs	Memoranda of Understanding
NYCRR	New York Codes, Rules and Regulations
NYS	New York State
ROW	Right-of-Way
Stafford Act	Robert T. Stafford Disaster Relief and Emergency Assistance Act
State	The State of New York

Definitions

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

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. The eligibility requirements for C&D debris include the following:

- 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-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 its numerical identification.

Force Account Labor – The use of the County's or municipalities' own personnel and equipment. Below force account labor information from Chapter 6, Section II of FEMA's Public Assistance Program and Policy Guide.

- 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 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 Public Assistance 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 that individual is not performing eligible work as long as the employee being replaced 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. 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 eligibility requirements for hazardous limbs according to FEMA Publication FP 104-009-2 are as follows:

- The limb is greater than two inches in diameter.
- The limb is still hanging in a tree and threatening a public-use area.
- 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.
- 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 eligibility requirements for leaning trees according to FEMA Publication 104-009-2 are as follows:

- 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 Resource Conservation and Recovery Act defines hazardous waste as materials that are ignitable, reactive, toxic, or corrosive. Examples of HHW include items such as paints, cleaners, pesticides, etc. Certified technicians must be used to handle, capture, recycle, reuse, and dispose of hazardous waste. The eligibility requirements 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.



- HHW must be a result of the major disaster incident.

Vegetative Debris – As outlined in FEMA Publication 104-009-2, vegetative debris consists of whole trees, stumps, trunks, branches, 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. The eligibility requirements for vegetative debris are as follows:

- 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.
- 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 requirements for removal of 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 County/municipality applying for reimbursement.
- White goods must be a result of the major disaster incident.



Appendix A

EQUIPMENT LIST

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Inventory of Equipment List

Tompkins County

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight	Blade*
-	-	-	-	-	-

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity (lb.)
25	International	4400	-	n/a
55	GMC	C7500	-	28,000

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Flatbed Trucks						
Designator	Manufacturer	Model	Year	Bed Length	Bed Width	Weight Capacity (lb.)
28	International	Terra Star	2013	-	-	19,500
31	International	Terra Star	2015	-	-	19,500
26	Freightliner	M2106	2019	-	-	27,000
30	Freightliner	M2106	2020	-	-	33,000
33	Western Star	4700SF	2020	-	-	69,000
33H	International	7600	2006	-	-	66,000
34	Kenworth	T805H	2016	-	-	66,000
36	International	7600	2006	-	-	66,000
37H	International	5900i	2013	-	-	n/a
38	Kenworth	T800	2016	-	-	66,000

Flatbed Trucks						
Designator	Manufacturer	Model	Year	Bed Length	Bed Width	Weight Capacity (lb.)
39	International	7600	2009	-	-	66,000
40	Kenworth	T805H	2017	-	-	66,000
44	International	IH2674	1999	-	-	63,750
45	International	7600	2013	-	-	66,000
47	International	5600i	2011	-	-	66,000
48	Kenworth	T805H	2017	-	-	66,000
49	Kenworth	T800	2016	-	-	66,000
50	International	7600	2007	-	-	66,000
52	Western Star	4700SF	2020	-	-	69,000
59	Isuzu	FVR	2008	-	-	33,000
68	International	4400	2010	-	-	27,000

Other Trucks					
Designator	Manufacturer	Model	Year	Volume Capacity (cu. ft.)	Weight Capacity (lb.)
10	Ford	F350	2020	-	6498
11HD	Ford	F250	2017	-	10,000
14	Ford	F150	2015	-	Not provided
15	Ford	F450	2020	-	Not provided
16	Ford	F150	2014	-	Not provided
17	Ford	F150	2013	-	Not provided
18	Ford	F350	2019	-	Not provided
19	Ford	F350	2020	-	Not provided
19HD	Ford	F250	2017	-	10,000
20	Ford	F350	2019	-	14,000
20H	Ford	F250	2008	-	9,400
21	Ford	F350	2020	-	6,498
21H	Ford	F250	2017	-	10,000
22	Toyota	Tacoma	2013	-	n/a
23	Ford	F350	2019	-	n/a
24	Ford	F450	2003	-	15,000
32	Ford	F450	2019	-	16,500
32H	Ford	F450	2013	-	n/a

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
115	Bandit	12XP	-	-
116	Bandit	19XP	-	-
117	Red River	LB 334	-	-
118	Barber Green	BG 240	-	-
7101	Promac	48C	-	-

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity (lbs.)
58	Case-IH	CX210	-	-
60	Gradall	XL3100	-	41,250
62	Gradall	XL4300	-	44,800
64	Case-IH	CX145D	-	-
69	Kobelco	SK35SR	-	7600
70	Gradall	XL4100	-	46,640
71	Gradall	XL4100	-	59,200
7100	Gradall	XL4100	-	-

Town of Caroline

Information on the equipment maintained by the Town of Caroline was not available.

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight	Blade*

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Village of Cayuga Heights

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight (lb.)	Blade*
Truck 3	N/A	GU532	Single axle	44,000	Flat
Truck 5	Freightliner	M2	Single axle	26,000	Flat

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity
-	-	-	-	-	-

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
Chipper	Morbark	Beever M18R	-	-

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
Backhoe	John Deere	310 HL	9	unknown

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
Mini excavator	Volvo	EC60E	9	unknown

Town of Danby

Information on the equipment maintained by the Town of Danby was not available.

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight	Blade*

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Town of Dryden

Information on the equipment maintained by the Town of Dryden was not available.

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight	Blade*

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Village of Dryden

Information on the equipment maintained by the Village of Dryden was not available.

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight	Blade*

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Town of Enfield

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight	Blade*

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
10-wheeler 1				
10-wheeler 2				
10-wheeler 3				
10-wheeler 4				
10-wheeler 5				

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
"Basic Chipper"				

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
"Rubber Tire Excavator with Thumb"				

Village of Freeville

Information on the equipment maintained by the Village of Freeville was not available.

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight	Blade*

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Town of Groton

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight	Blade*

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
Dump Truck 1				
Dump Truck 2				
Dump Truck 3				
Dump Truck 4				
Dump Truck 5				
Dump Truck 6				
Dump Truck 7				

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Village of Groton

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight	Blade*

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
Multiple				

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
Small Chipper				

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
Multiple				

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

City of Ithaca

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Weight Capacity (lb.)	Blade*
#13	Ford	F550	DRW pickup	18,000	9' flat
#26	International	2574	Single axle	45,000	11' flat
#31	Ford	F550	DRW pickup	18,000	9' flat
#32	International	7500	Single axle	45,000	11' flat
#35	Ford	F350	pickup	10,600	8.5' flat
#68	Ram	5500	DRW pickup	19,500	9' flat
#69	Ram	5500	DRW pickup	19,500	9' flat
#110	Ford	F350	DRW pickup	14,000	8.5' flat
#150	Ford	F350	DRW pickup	13,000	8.5' flat
#156	Ram	3500	DRW pickup	14,000	9' flat
#169	Ram	3500	Pickup	13,000	8.5' V blade
#173	Ford	F250	Pickup	10,000	8.5' flat
#190	Ford	F250	Pickup	10,000	8.5' flat
#221	International	7500	Single axle	42,540	11' flat
#225	International	HV507	Single axle	45,000	11' flat
#270	International	7500	Single axle	45,120	11' flat
#322	Ford	F250	Pickup	10,000	8' flat
#364	International	7500	Single axle	45,760	11' flat

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity	Weight Capacity (lb.)
#16	International	MV607	3 yards	20,000
#19	International	4300	3 yards	20,000
#21	International	7600	10 yards	40,000
#26	International	2574	3 yards	20,000
#27	International	7600	10 yards	40,000
#32	International	7500	5 yards	20,000
#71	Ford	F550	3 yards	8,000
#72	Ford	F550	3 yards	8,000
#90	Mack	GR64F	12 yards	50,000
#96	Mack	GR64F	12 yards	50,000
#97	Volvo	VHD84F	12 yards	50,000
#98	International	7600	10 yards	40,000
#143	International	2574	3 yards	20,000
#156	Ram	3500	3 yards	6,000
#164	International	7600	10 yards	40,000

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity	Weight Capacity (lb.)
#187	Ford	F350	3 yards	5,000
#221	International	7500	5 yards	20,000
#225	International	HV507	5 yards	20,000
#246	International	2674	5 yards	20,000
#283	Ford	F350	3 yards	5,000
#286	International	4300	3 yards	20,000
#330	International	4300	3 yards	10,000
#364	International	7500	5 yards	20,000
#701	International	MV607	3 yards	15,000

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity (lb.)
#13	Ford	F550	10'	8'	8,000
#68	Ram	5500	10'	8'	8,000
#69	Ram	5500	10'	8'	8,000
#137	Ram	3500	9'	8'	6,000
#653	International	7500	16'	8'	15,000

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
#420	Morbank	1621	-	-

Grinders				
Designator	Manufacturer	Model	Type	Weight Capacity
#176	Carlton	7500	Grind wood	n/a

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity (lb.)
#451	Caterpillar	420-07XE	30	6,500
#464	Caterpillar	416C	30	6,000
#704	Case	580 M	30	6,000
#705	Case	580SN	30	6,500

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity (lb.)
#138	Komatsu	P138USLC	27	6,000
#234	Case	CX55B	12	1,200
#298	Caterpillar	305.5E2CR	12	1,200
#299	Caterpillar	305.5E2	12	1,200
#354	JCB	JZ140	27	6,000
#545	Kobelco	SK160LC	25	6,000
#654	Komatsu	PC200LC-8	30	8,000

Wheel Loaders				
Designator	Manufacturer	Model	Bucket Volume	Bucket Weight Capacity (lb.)
#91	Case	21D	1.5 yards	6,000
#118	Case	621C	2.5 yards	15,000
#127	John Deere	544K	2.5 yards	15,000
#357	Case	621F	2.5 yards	15,000
#448	John Deere	544G	2.5 yards	15,000

Town of Ithaca

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight (lb.)	Blade*
Truck 9	Volvo	VHD64F300	Tandem	66,000	One Directional Plow w/ straight blade wing

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity (lb.)
Truck 5/Trailer 5	International/Flow Boy	760	600	100,000

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity
Truck 5/T10	Low Boy	Globe	24'	8'6"	86,000

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity (lb.)
Truck 62	Freightliner Refuse Packer	16 M	10	10,000 lb.

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
Chipper #82	Morbark	M18R	-	-

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity (lb.)
#42	New Holland	B95bmg	27	3 tons

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity (lb.)
Backhoe #68	Caterpillar	308	9	n/a

Town of Lansing

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight (lb.)	Blade*
Truck 2	International	HX	Tandem	66,000	11"
Truck 1	International	7600	Tandem	66,000	11"

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity
-	-	-	-	-	-

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Village of Lansing

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight	Blade*
-	-	-	-	-	-

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
Truck 1	International	7600	450	66,000
Truck 2	International	HX	450	66,000

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity
-	-	-	-	-	-

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
E1	Bobcat	E55	6 cubic feet	13,000

Town of Newfield

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight (lb.)	Blade*
Truck 7	Mack	GU713	Tandem	66,000	11' one-way plow and 11' wing
Truck 1	Ford	F-550	Single axle	19,500	9' angle blade
Truck 18	Ford	F-350	Pickup Truck	10,500	9' angle blade
Truck 4	Freightliner	FLD120	Tandem	66,000	11' one-way plow and 11' wing
Truck 8	Freightliner	M2	Single axle	33,000	10' angle blade
Truck 5	Freightliner	FLD120	Tandem	66,000	11' one-way plow and 11' wing
Truck 10	Ford	F-350	Pickup Truck	10,5000	9' angle blade
Truck 3	Mack	GU713	Tandem	66,000	11' one-way plow and 11' wing
Truck 9	Mack	GU	Tandem	66,000	11' one-way plow and 11' wing

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
Truck 2	Volvo	VHD	378	17 tons
Truck 3	Mack	GU713	378	17 tons
Truck 4	Freightliner	FLD120	378	17 tons
Truck 5	Freightliner	FLD120	378	17 tons
Truck 7	Mack	GU713	378	17 tons
Truck 9	Mack	GU713	378	17 tons
Truck 8	Freightliner	M2	240	8 tons

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity
-	-	-	-	-	-

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
Chipper	Brush Bandit	280xp	-	-

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
-	-	-	-	-

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity
Backhoe	Caterpillar	420 FIT	Front bucket 35.1 cubic feet	10,242 lb.

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity (lb.)
Mini Excavator	Caterpillar	306 CR	6.75 cubic feet	15,821 lb. total weight and 7,839 lb. lifting capacity

Village of Trumansburg

Information on the equipment maintained by the Village of Trumansburg was not available.

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight	Blade*

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Town of Ulysses

Information on the equipment maintained by the Town of Ulysses was not available.

Plow Trucks					
Designator	Manufacturer	Model	Axle Type	Gross Vehicle Weight	Blade*

*Blade: dimensions, flat versus v-shaped, etc.

On-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Off-Road Dump Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Flatbed Trucks					
Designator	Manufacturer	Model	Bed Length	Bed Width	Weight Capacity

Other Trucks				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Chippers				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Grinders				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Backhoes				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Excavators				
Designator	Manufacturer	Model	Volume Capacity (cu. ft.)	Weight Capacity

Casella

On any given day, Casella Waste Management of N.Y., Inc. (Casella) may have the following resources available for assisting Tompkins County and its municipality with debris management operations:

At the Horseheads Hauling Disposal Site, Horseheads, NY

- 1-3 skid steers
- 1 roll-off truck
- 1 to 2 rear load packers
- Several roll-off containers of 10 cubic yards (cy), 20 cy, or 30 cy capacities. Inventory changes daily.

At the Bath Transfer Station, Bath, NY

- 1 backhoe
- 1 roll-off truck
- Several roll-off containers of 10 cubic yards (cy), 20 cy, or 30 cy capacities. Inventory changes daily.

At the Chemung Transfer Station, Chemung, NY

- 1-3 skid steers
- Several roll-off containers of 10 cubic yards (cy), 20 cy, or 30 cy capacities. Inventory changes daily.

At the Newfield Hauling location, Newfield, NY

- 1 skid steer
- 1 backhoe
- 1 excavator
- 1-3 roll-off trucks
- 1 to 2 rear-load packers
- Several roll-off containers of 10 cubic yards (cy), 20 cy, or 30 cy capacities. Inventory changes daily.

Additional Resources

While resources were discussed by the County's institutions of higher education a formal inventory was not collected. This may be an area further detailed in subsequent updates of the plan.

Appendix B
DEBRIS MANAGEMENT JOB AID CHECKLISTS

Debris Manager

Position Description:	The Debris Manager oversees disaster debris management operations in accordance with the Debris Management Plan as well as local, regional, state, and federal regulations
Reports To:	Emergency Operations Center
Responsibilities:	<ul style="list-style-type: none"><input type="checkbox"/> Establish a Debris Management Operations Center (DMOC).<input type="checkbox"/> Activate staff for debris clearing and debris monitoring services.<input type="checkbox"/> Establish the Incident Command System (ICS) for debris management operations.<input type="checkbox"/> Coordinate with Tompkins County Purchasing Division and municipal purchasing officials to activate staff and contractors for debris clearing and debris monitoring services.<input type="checkbox"/> Establish priorities for debris management operations.<input type="checkbox"/> Collaborate with federal, state, and other agency representatives.<input type="checkbox"/> Provide updates to the Tompkins County Department of Emergency Response regarding debris management operations.<input type="checkbox"/> Review and approve public information messages regarding debris operations.<input type="checkbox"/> Coordinate with Tompkins County Finance Department and municipal finance staff in the tracking of debris management costs.<input type="checkbox"/> Coordinate the demobilization of debris management operations.

Safety Officer

Position Description:	The Safety Officer ensures debris management operations are conducted in a safe manner in accordance with Tompkins County's safety program.
Reports To:	Debris Manager
Responsibilities:	<ul style="list-style-type: none"><input type="checkbox"/> Create a safety plan.<input type="checkbox"/> Ensure safety messages are developed and briefings are conducted.<input type="checkbox"/> Exercise emergency authority to stop and prevent unsafe acts during debris operations.<input type="checkbox"/> Revise Incident Action Plans for safety considerations.<input type="checkbox"/> Investigate accidents and near misses.<input type="checkbox"/> Participate in planning meetings.<input type="checkbox"/> Review and approve the medical plan.

Debris Clearing Task Force Leader

Position Description:	The Debris Clearing Task Force Leader oversees street clearing operations immediately following a disaster to ensure emergency vehicles and utility restoration crews can access and traverse roads in conducting emergency response operations.
Reports To:	Debris Manager
Responsibilities:	<ul style="list-style-type: none"><input type="checkbox"/> 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 streets.<input type="checkbox"/> Oversee street clearing immediately following a debris generating incident.<input type="checkbox"/> Coordinate with local and contract resources to clear streets of debris in accordance with established objectives and priorities.<input type="checkbox"/> Track progress of debris clearing operations.<input type="checkbox"/> Provide regular updates to the Debris Manager regarding the status of operations.<input type="checkbox"/> Coordinate with the Safety Officer to ensure street clearing operations are conducted in a safe manner.<input type="checkbox"/> Ensure all hours, expenses, and equipment use are accurately documented.

Debris Clearing Task Force

Position Description:	The Debris Clearing Task Force conduct street clearing immediately following a disaster to ensure emergency vehicles and utility restoration crews can access and traverse roads in conducting emergency response operations.
Reports To:	Debris Clearing Task Force Leader
Responsibilities:	<ul style="list-style-type: none"><input type="checkbox"/> Coordinate through the Debris Clearing Task Force Leader to divide into teams and clear streets of debris in accordance with established objectives and priorities.<input type="checkbox"/> Report any hazardous conditions such as downed power lines, hazardous materials spills, natural gas leaks to the proper authorities as well as the Debris Clearing Task Force Leader.<input type="checkbox"/> Track progress of the Task Force in debris clearing operations.<input type="checkbox"/> Provide updates as required to the Debris Clearing Task Force Leader regarding status and progress of the Task Force.<input type="checkbox"/> Obey health and safety policy and follow health and safety guidance in conducting street clearing operations.<input type="checkbox"/> Ensure all hours, expenses, and equipment use are accurately documented.

Debris Collection and Disposal Task Force Leader

Position Description:	The Debris Collection and Disposal Task Force Leader oversees debris collection and disposal operations.
Reports To:	Debris Manager
Responsibilities:	<ul style="list-style-type: none"> <input type="checkbox"/> Coordinate with County, 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. <input type="checkbox"/> Coordinate with the Debris Monitoring staff to conduct truck certifications. <input type="checkbox"/> Coordinate local and contract resources to conduct debris collection operations in accordance with established objectives and priorities. <input type="checkbox"/> Coordinate with the Debris Monitoring Staff to conduct collection, DMS, and disposal site monitoring. <input type="checkbox"/> Activate DMS locations as needed in coordination with relevant departments and agencies. <input type="checkbox"/> Coordinate with Environmental Health Task Force Leader to conduct soil sampling at DMS locations prior to and after closure of DMS. <input type="checkbox"/> Coordinate with local labor and contractors to ensure debris is recycled or disposed of in accordance with regulatory guidelines. <input type="checkbox"/> Coordinate local and contract resources to conduct special debris operations including removal of dangerous trees, privately owned vehicles and vessels, waterway debris, parks debris, and private property debris, in accordance with FEMA authorization and guidelines. <input type="checkbox"/> Track progress of debris collection, recycling and disposal in coordination with the Debris Monitoring Staff. <input type="checkbox"/> Provide regular updates to the Debris Manager regarding the status of operations. <input type="checkbox"/> Coordinate with the Safety Officer to ensure debris collection and disposal operations are conducted in a safe manner. <input type="checkbox"/> Ensure all hours, expenses, and equipment use are accurately documented.

Debris Collection and Disposal Task Force

Position Description:	The Debris Collection and Disposal Task Force conducts debris collection and disposal operations.
Reports To:	Debris Collection and Disposal Task Force Leader
Responsibilities:	<ul style="list-style-type: none"><input type="checkbox"/> Coordinate through the Debris Collection and Disposal Task Force Leader and the monitoring staff to collect debris and deliver it to the appropriate location for reduction, recycling, or disposal in coordination with the debris monitoring staff.<input type="checkbox"/> Report any hazardous conditions such as downed power lines, hazardous materials spills, natural gas leaks to the proper authorities as well as the Debris Collection and Disposal Task Force Leader.<input type="checkbox"/> Provide updates as required to the Debris Collection and Disposal Task Force Leader regarding the status and progress of the Task Force.<input type="checkbox"/> Obey the health and safety policy and follow health and safety guidance in conducting debris removal, reduction, and disposal operations.<input type="checkbox"/> Ensure all hours, expenses and equipment use are accurately documented.

Environmental Health Task Force Leader

Position Description:	The Environmental Health Task Force Leader monitors the impacts of debris operations and liaises with regional, State, and Federal environmental agency representatives.
Reports To:	Debris Manager
Responsibilities:	<ul style="list-style-type: none"><input type="checkbox"/> Liaise with regional, state, and federal environmental agencies and contractors to monitor the environmental impacts of debris management operations including air, soil, and asbestos monitoring.<input type="checkbox"/> 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.<input type="checkbox"/> Track the progress of environmental monitoring and testing operations and document results.<input type="checkbox"/> Provide regular updates to the Debris Manager regarding the status of environmental monitoring operations.<input type="checkbox"/> Coordinate with the Safety Officer to ensure environmental monitoring operations are conducted in a safe manner.<input type="checkbox"/> Ensure all hours, expenses, and equipment use are accurately documented.

Environmental Health Task Force

Position Description:	The Environmental Health Task Force monitors the impacts of debris operations.
Reports To:	Environmental Health Task Force Leader
Responsibilities:	<ul style="list-style-type: none"><input type="checkbox"/> Coordinate with the Environmental Health Task Force Leader, or designee, to conduct soil sampling at DMS locations prior to and after closure of DMS.<input type="checkbox"/> Track the progress of environmental monitoring and testing operations and document results.<input type="checkbox"/> Provide regular updates to the Environmental Health Task Force Leader regarding the status of environmental monitoring operations.<input type="checkbox"/> Obey the health and safety policy and follow health and safety guidance in conducting debris removal, reduction, and disposal operations.<input type="checkbox"/> Ensure all hours, expenses, and equipment use are accurately documented.

Appendix C
DEBRIS MANAGEMENT CHECKLISTS

DEBRIS MANAGEMENT CHECKLISTS

Normal Operations Checklist			
Task Description	Date Assigned	Assigned To	Date Completed
Update contact and equipment lists.			
Evaluate pre-identified and potential DMS locations.			
Request pre-approval of new DMS locations from the NYS DEC.			
Review road lists and road maps.			
Establish and maintain pre-positioned contracts.			
Review State and FEMA guidance.			

DEBRIS MANAGEMENT CHECKLISTS

Pre-Incident Checklist			
Task Description	Date Assigned	Assigned To	Date Completed
Download most recent road list, maps, and other relevant documents to a portable storage device.			
Alert key personnel and place monitoring firm and debris removal contractors on stand-by. Discuss with the monitoring firm and debris removal contractors should address the following key issues: <ul style="list-style-type: none"> • Availability and amount of assets that will be dedicated to debris removal operations. • Estimated time of mobilization. • Exchange of mobile contact information. • Identification of staging area(s) for truck certification. 			
Review DMP with key personnel.			
Review and modify (as appropriate) the Health and Safety Strategy.			
Issue pre-event media press releases.			

DEBRIS MANAGEMENT CHECKLISTS

Response Checklist			
Task Description	Date Assigned	Assigned To	Date Completed
Conduct damage assessments.			
Establish a Debris Management Operations Center (DMOC).			
Activate monitoring and debris removal staff/contractors.			
Begin emergency roadway debris clearance.			
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).			
Issue media press release.			

DEBRIS MANAGEMENT CHECKLISTS

Recovery Checklist: 2 Days – 2 Weeks			
Task Description	Date Assigned	Assigned To	Date Completed
Open DMSs.			
Prioritize roads/areas.			
Issue press release regarding segregation of debris.			
Begin ROW debris removal.			
Perform parks damage assessment.			
Begin program of environmental monitoring of DMSs.			
Coordinate with external agencies.			
Initiate discussions with FEMA.			
Obtain FEMA guidance for gated community and private property debris removal.			

DEBRIS MANAGEMENT CHECKLISTS

Recovery Checklist: 2 Weeks – 1 Month			
Task Description	Date Assigned	Assigned To	Date Completed
Maintain and evaluate ROW cleanup.			
Begin ROW stump removal as necessary.			
Open additional DMSs 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.			

DEBRIS MANAGEMENT CHECKLISTS

Recovery Checklist: 1 Month – 3 Months			
Task Description	Date Assigned	Assigned To	Date Completed
Maintain and evaluate ROW cleanup – vegetative and C&D.			
Begin ROW leaners (dangerous leaning trees) and hangers (dangerous limbs) program.			
Initiate haul-out.			
Progress to weekly meetings with FEMA.			

DEBRIS MANAGEMENT CHECKLISTS

Recovery Checklist: 3 Months – Project Completion			
Task Description	Date Assigned	Assigned To	Date Completed
Complete all debris recovery activities.			
Identify ineligible debris on ROW.			
Complete the disposal of reduced debris.			
Close out and remediate DMSs.			
Conduct project close-out meetings with FEMA and external agencies.			

Appendix D

DEBRIS CONTRACTOR CHECKLIST AND GUIDELINES

The Disaster Debris Contract Checklist was designed to guide Tompkins County and its municipalities in contracting disaster debris services. The checklist provides a step-by-step process to procuring disaster debris services that complies with current federal standards and best practices. The checklist includes the steps to solicit bids, review proposals, and select an appropriate contractor. The checklist was developed using guidance set forth by the Federal Emergency Management Agency (FEMA) and the provisions of Title 2 Code of Federal Regulations (CFR) Part 200 General Procurement Standards.

Tabs A and B, attached to this document, provide additional details on procurement policies:

- Tab A: 2 CFR Parts 200.317 – 200.326
- Tab B: Checklist for Reviewing Procurements Under Grants by Non-Federal Entities (States, local and tribal governments, Institutions of Higher Education, Hospitals, and Private Non-Profit Organizations)

Disaster Debris Contract Checklist

Task	Responsibility	Completion Date
Pre-Disaster Tasks		
Solicit a request for proposals for disaster debris services (see Debris Hauler Sample Request for Proposals [Appendix E] for specific contract provisions).		
The solicitation for prequalified contractors should include: <ul style="list-style-type: none"> <input type="checkbox"/> Adequately defined scope of work <input type="checkbox"/> All potential debris types <input type="checkbox"/> Anticipated haul distances <input type="checkbox"/> Potential size of debris events <input type="checkbox"/> Hourly labor, equipment and material price schedule <input type="checkbox"/> Performance bond requirements 		
Qualify bidders by requesting documentation of the following: <ul style="list-style-type: none"> <input type="checkbox"/> Licenses <input type="checkbox"/> Financial stability <input type="checkbox"/> Proof of insurance <input type="checkbox"/> Bonding capability <input type="checkbox"/> Description of related experience and capabilities including total verified cubic yards removed and processed <input type="checkbox"/> References including jurisdiction name, point of contact, email address and phone number <input type="checkbox"/> Description of health and safety plan, including operation plan at debris management site(s) 		
Contractors that have been declared debarred by the Office of Federal Contract Compliance Programs should not be considered . A complete list of federally disbarred contractors can be found in the System for Award Management (SAM) dataset at www.sam.gov .		

Task	Responsibility	Completion Date
<p>Check the status of prequalified contractors in the SAM database <u>at the time of the disaster.</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Go to the SAM Database at https://www.sam.gov/portal/public/SAM/. <input type="checkbox"/> Under the Search Records tab, enter a DUNS number, CAGE code or Business Name to search for the contractor you are interested in pre-qualifying. <input type="checkbox"/> Note any exclusions listed for the contractor that may prohibit federal assistance for debris services. <input type="checkbox"/> Print the screen with the results and file in records. 		
Ensure compliance with the jurisdiction's procurement procedures.		
Ensure compliance with applicable state and local procurement laws and regulations.		
Ensure compliance with federal procurement laws and standards identified in 2 CFR 200 (see Tab A).		
Ensure competition (see the provisions in Section 200.319 Competition in Tab A for specific requirements regarding competition).		
Provide a clear and definitive scope of work.		
Develop a cost analysis to demonstrate cost reasonableness <u>for any contract or contract modification where price competition is lacking.</u>		
Ensure opportunities for minority and women-owned businesses and firms whenever possible. Require prime contractors to utilize minority and women-owned businesses as scope allows per the provisions laid out in 2 CFR 200.		
Document the process and rationale the jurisdiction followed in making procurement decisions.		
Conduct a review by the jurisdiction's legal counsel of the procurement process and any potential contracts to be awarded to ensure compliance with all federal, state, and local requirements.		
Establish procedures to address protests and disputes related to contract awards.		
Compile all documentation related to the procurement and file in a secure location that can be accessed for future review.		

TAB A: 2 CFR 200 PROCUREMENT STANDARDS

PROCUREMENT STANDARDS

§200.317 Procurements by states.

When procuring property and services under a Federal award, a state must follow the same policies and procedures it uses for procurements from its non-Federal funds. The state will comply with §200.322 Procurement of recovered *materials* and ensure that every purchase order or other contract includes any clauses required by section §200.326 Contract provisions. All other non-Federal entities, including subrecipients of a state, will follow §§200.318 General procurement standards through 200.326 Contract provisions.

§200.318 General procurement standards.

(a) The non-Federal entity must use its own documented procurement procedures which reflect applicable State, local, and tribal laws and regulations, provided that the procurements conform to applicable Federal law and the standards identified in this part.

(b) Non-Federal entities must maintain oversight to ensure that contractors perform in accordance with the terms, conditions, and specifications of their contracts or purchase orders.

(c)(1) The non-Federal entity must maintain written standards of conduct covering conflicts of interest and governing the actions of its employees engaged in the selection, award and administration of contracts. No employee, officer, or agent may participate in the selection, award, or administration of a contract supported by a Federal award if he or she has a real or apparent conflict of interest. Such a conflict of interest would arise when the employee, officer, or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated herein, has a financial or other interest in or a tangible personal benefit from a firm considered for a contract. The officers, employees, and agents of the non-Federal entity may neither solicit nor accept gratuities, favors, or anything of monetary value from contractors or parties to subcontracts. However, non-Federal entities may set standards for situations in which the financial interest is not substantial or the gift is an unsolicited item of nominal value. The standards of conduct must provide for disciplinary actions to be applied for violations of such standards by officers, employees, or agents of the non-Federal entity.

(2) If the non-Federal entity has a parent, affiliate, or subsidiary organization that is not a state, local government, or Indian tribe, the non-Federal entity must also maintain written standards of conduct covering organizational conflicts of interest. Organizational conflicts of interest means that because of relationships with a parent company, affiliate, or subsidiary organization, the non-Federal entity is unable or appears to be unable to be impartial in conducting a procurement action involving a related organization.

(d) The non-Federal entity's procedures must avoid acquisition of unnecessary or duplicative items. Consideration should be given to consolidating or breaking out procurements to obtain a more economical purchase. Where appropriate, an analysis will be made of lease versus purchase alternatives, and any other appropriate analysis to determine the most economical approach.

(e) To foster greater economy and efficiency, and in accordance with efforts to promote cost-effective use of shared services across the Federal Government, the non-Federal entity is encouraged to enter into state and local intergovernmental agreements or inter-entity agreements where appropriate for procurement or use of common or shared goods and services.

(f) The non-Federal entity is encouraged to use Federal excess and surplus property in lieu of purchasing new equipment and property whenever such use is feasible and reduces project costs.

(g) The non-Federal entity is encouraged to use value engineering clauses in contracts for construction projects of sufficient size to offer reasonable opportunities for cost reductions. Value engineering is a systematic and creative analysis of each contract item or task to ensure that its essential function is provided at the overall lower cost.

(h) The non-Federal entity must award contracts only to responsible contractors possessing the ability to perform successfully under the terms and conditions of a proposed procurement. Consideration will be given to such matters as contractor integrity, compliance with public policy, record of past performance, and financial and technical resources. See also §200.213 Suspension and debarment.

(i) The non-Federal entity must maintain records sufficient to detail the history of procurement. These records will include, but are not necessarily limited to the following: rationale for the method of procurement, selection of contract type, contractor selection or rejection, and the basis for the contract price.

(j)(1) The non-Federal entity may use a time and materials type contract only after a determination that no other contract is suitable and if the contract includes a ceiling price that the contractor exceeds at its own risk. Time and materials type contract means a contract whose cost to a non-Federal entity is the sum of:

(i) The actual cost of materials; and

(ii) Direct labor hours charged at fixed hourly rates that reflect wages, general and administrative expenses, and profit.

(2) Since this formula generates an open-ended contract price, a time-and-materials contract provides no positive profit incentive to the contractor for cost control or labor efficiency. Therefore, each contract must set a ceiling price that the contractor exceeds at its own risk. Further, the non-Federal entity awarding such a contract must assert a high degree of oversight in order to obtain reasonable assurance that the contractor is using efficient methods and effective cost controls.

(k) The non-Federal entity alone must be responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements. These issues include, but are not limited to, source evaluation, protests, disputes, and claims. These standards do not relieve the non-Federal entity of any contractual responsibilities under its contracts. The Federal awarding agency will not substitute its judgment for that of the non-Federal entity unless the matter is primarily a Federal concern. Violations of law will be referred to the local, state, or Federal authority having proper jurisdiction.

[78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75885, Dec. 19, 2014; 80 FR 43309, July 22, 2015]

§200.319 Competition.

(a) All procurement transactions must be conducted in a manner providing full and open competition consistent with the standards of this section. In order to ensure objective contractor performance and eliminate unfair competitive advantage, contractors that develop or draft specifications, requirements, statements of work, or invitations for bids or requests for proposals must be excluded from competing for such procurements. Some of the situations considered to be restrictive of competition include but are not limited to:

- (1) Placing unreasonable requirements on firms in order for them to qualify to do business;
- (2) Requiring unnecessary experience and excessive bonding;
- (3) Noncompetitive pricing practices between firms or between affiliated companies;
- (4) Noncompetitive contracts to consultants that are on retainer contracts;
- (5) Organizational conflicts of interest;
- (6) Specifying only a “brand name” product instead of allowing “an equal” product to be offered and describing the performance or other relevant requirements of the procurement; and
- (7) Any arbitrary action in the procurement process.

(b) The non-Federal entity must conduct procurements in a manner that prohibits the use of statutorily or administratively imposed state, local, or tribal geographical preferences in the evaluation of bids or proposals, except in those cases where applicable Federal statutes expressly mandate or encourage geographic preference. Nothing in this section preempts state licensing laws. When contracting for architectural and engineering (A/E) services, geographic location may be a selection criterion provided its application leaves an appropriate number of qualified firms, given the nature and size of the project, to compete for the contract.

(c) The non-Federal entity must have written procedures for procurement transactions. These procedures must ensure that all solicitations:

(1) Incorporate a clear and accurate description of the technical requirements for the material, product, or service to be procured. Such description must not, in competitive procurements, contain features which unduly restrict competition. The description may include a statement of the qualitative nature of the material, product or service to be procured and, when necessary, must set forth those minimum essential characteristics and standards to which it must conform if it is to satisfy its intended use. Detailed product specifications should be avoided if at all possible. When it is impractical or uneconomical to make a clear and accurate description of the technical requirements, a “brand name or equivalent” description may be used as a means to define the performance or other salient requirements of procurement. The specific features of the named brand which must be met by offers must be clearly stated; and

(2) Identify all requirements which the offerors must fulfill and all other factors to be used in evaluating bids or proposals.

(d) The non-Federal entity must ensure that all prequalified lists of persons, firms, or products which are used in acquiring goods and services are current and include enough qualified sources to ensure maximum open and free competition. Also, the non-Federal entity must not preclude potential bidders from qualifying during the solicitation period.

[78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75885, Dec. 19, 2014]

§200.320 Methods of procurement to be followed.

The non-Federal entity must use one of the following methods of procurement.

(a) Procurement by micro-purchases. Procurement by micro-purchase is the acquisition of supplies or services, the aggregate dollar amount of which does not exceed the micro-purchase threshold (§200.67 Micro-purchase). To the extent practicable, the non-Federal entity must distribute micro-purchases equitably among qualified suppliers. Micro-purchases may be awarded without soliciting competitive quotations if the non-Federal entity considers the price to be reasonable.

(b) Procurement by small purchase procedures. Small purchase procedures are those relatively simple and informal procurement methods for securing services, supplies, or other property that do not cost more than the Simplified Acquisition Threshold. If small purchase procedures are used, price or rate quotations must be obtained from an adequate number of qualified sources.

(c) Procurement by sealed bids (formal advertising). Bids are publicly solicited and a firm fixed price contract (lump sum or unit price) is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest in price. The sealed bid method is the preferred method for procuring construction, if the conditions in paragraph (c)(1) of this section apply.

(1) In order for sealed bidding to be feasible, the following conditions should be present:

(i) A complete, adequate, and realistic specification or purchase description is available;

(ii) Two or more responsible bidders are willing and able to compete effectively for the business; and

(iii) The procurement lends itself to a firm fixed price contract and the selection of the successful bidder can be made principally on the basis of price.

(2) If sealed bids are used, the following requirements apply:

(i) Bids must be solicited from an adequate number of known suppliers, providing them sufficient response time prior to the date set for opening the bids, for local, and tribal governments, the invitation for bids must be publicly advertised;

(ii) The invitation for bids, which will include any specifications and pertinent attachments, must define the items or services in order for the bidder to properly respond;

(iii) All bids will be opened at the time and place prescribed in the invitation for bids, and for local and tribal governments, the bids must be opened publicly;

(iv) A firm fixed price contract award will be made in writing to the lowest responsive and responsible bidder. Where specified in bidding documents, factors such as discounts, transportation cost, and life cycle costs must be considered in determining which bid is lowest. Payment discounts will only be used to determine the low bid when prior experience indicates that such discounts are usually taken advantage of; and

(v) Any or all bids may be rejected if there is a sound documented reason.

(d) Procurement by competitive proposals. The technique of competitive proposals is normally conducted with more than one source submitting an offer, and either a fixed price or cost-reimbursement type contract is awarded. It is generally used when conditions are not appropriate for the use of sealed bids. If this method is used, the following requirements apply:

(1) Requests for proposals must be publicized and identify all evaluation factors and their relative importance. Any response to publicized requests for proposals must be considered to the maximum extent practical;

(2) Proposals must be solicited from an adequate number of qualified sources;

(3) The non-Federal entity must have a written method for conducting technical evaluations of the proposals received and for selecting recipients;

(4) Contracts must be awarded to the responsible firm whose proposal is most advantageous to the program, with price and other factors considered; and

(5) The non-Federal entity may use competitive proposal procedures for qualifications-based procurement of architectural/engineering (A/E) professional services whereby competitors' qualifications are evaluated and the most qualified competitor is selected, subject to negotiation of fair and reasonable compensation. The method, where price is not used as a selection factor, can only be used in procurement of A/E professional services. It cannot be used to purchase other types of services though A/E firms are a potential source to perform the proposed effort.

(e) [Reserved]

(f) Procurement by noncompetitive proposals. Procurement by noncompetitive proposals is procurement through solicitation of a proposal from only one source and may be used only when one or more of the following circumstances apply:

(1) The item is available only from a single source;

(2) The public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation;

(3) The Federal awarding agency or pass-through entity expressly authorizes noncompetitive proposals in response to a written request from the non-Federal entity; or

(4) After solicitation of a number of sources, competition is determined inadequate.

[78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75885, Dec. 19, 2014; 80 FR 54409, Sept. 10, 2015]

§200.321 Contracting with small and minority businesses, women's business enterprises, and labor surplus area firms.

(a) The non-Federal entity must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible.

(b) Affirmative steps must include:

(1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

(2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;

(3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;

(4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;

(5) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and

(6) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (1) through (5) of this section.

§200.322 Procurement of recovered materials.

A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

[78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75885, Dec. 19, 2014]

§200.323 Contract cost and price.

(a) The non-Federal entity must perform a cost or price analysis in connection with every procurement action in excess of the Simplified Acquisition Threshold including contract modifications. The method and degree of analysis is dependent on the facts surrounding the particular procurement situation, but as a starting point, the non-Federal entity must make independent estimates before receiving bids or proposals.

(b) The non-Federal entity must negotiate profit as a separate element of the price for each contract in which there is no price competition and in all cases where cost analysis is performed. To establish a fair and reasonable profit, consideration must be given to the complexity of the work to be performed, the risk borne by the contractor, the contractor's investment, the amount of subcontracting, the quality of its record of past performance, and industry profit rates in the surrounding geographical area for similar work.

(c) Costs or prices based on estimated costs for contracts under the Federal award are allowable only to the extent that costs incurred or cost estimates included in negotiated prices would be allowable for the non-Federal entity under Subpart E—Cost Principles of this part. The non-Federal entity may reference its own cost principles that comply with the Federal cost principles.

(d) The cost plus a percentage of cost and percentage of construction cost methods of contracting must not be used.

§200.324 Federal awarding agency or pass-through entity review.

(a) The non-Federal entity must make available, upon request of the Federal awarding agency or pass-through entity, technical specifications on proposed procurements where the Federal awarding

agency or pass-through entity believes such review is needed to ensure that the item or service specified is the one being proposed for acquisition. This review generally will take place prior to the time the specification is incorporated into a solicitation document. However, if the non-Federal entity desires to have the review accomplished after a solicitation has been developed, the Federal awarding agency or pass-through entity may still review the specifications, with such review usually limited to the technical aspects of the proposed purchase.

(b) The non-Federal entity must make available upon request, for the Federal awarding agency or pass-through entity pre-procurement review, procurement documents, such as requests for proposals or invitations for bids, or independent cost estimates, when:

(1) The non-Federal entity's procurement procedures or operation fails to comply with the procurement standards in this part;

(2) The procurement is expected to exceed the Simplified Acquisition Threshold and is to be awarded without competition or only one bid or offer is received in response to a solicitation;

(3) The procurement, which is expected to exceed the Simplified Acquisition Threshold, specifies a "brand name" product;

(4) The proposed contract is more than the Simplified Acquisition Threshold and is to be awarded to other than the apparent low bidder under a sealed bid procurement; or

(5) A proposed contract modification changes the scope of a contract or increases the contract amount by more than the Simplified Acquisition Threshold.

(c) The non-Federal entity is exempt from the pre-procurement review in paragraph (b) of this section if the Federal awarding agency or pass-through entity determines that its procurement systems comply with the standards of this part.

(1) The non-Federal entity may request that its procurement system be reviewed by the Federal awarding agency or pass-through entity to determine whether its system meets these standards in order for its system to be certified. Generally, these reviews must occur where there is continuous high-dollar funding, and third party contracts are awarded on a regular basis;

(2) The non-Federal entity may self-certify its procurement system. Such self-certification must not limit the Federal awarding agency's right to survey the system. Under a self-certification procedure, the Federal awarding agency may rely on written assurances from the non-Federal entity that it is complying with these standards. The non-Federal entity must cite specific policies, procedures, regulations, or standards as being in compliance with these requirements and have its system available for review.

§200.325 Bonding requirements.

For construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold, the Federal awarding agency or pass-through entity may accept the bonding policy and requirements of the non-Federal entity provided that the Federal awarding agency or pass-through entity has made a determination that the Federal interest is adequately protected. If such a determination has not been made, the minimum requirements must be as follows:

(a) A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.

(b) A performance bond on the part of the contractor for 100 percent of the contract price. A “performance bond” is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.

(c) A payment bond on the part of the contractor for 100 percent of the contract price. A “payment bond” is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

§200.326 Contract provisions.

The non-Federal entity's contracts must contain the applicable provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards.

TAB B: Checklist for Reviewing Procurements Under Grants by Non-Federal Entities (States, local and tribal governments, Institutions of Higher Education, Hospitals, and private non-profit organizations) – 2 CFR pt. 200

This checklist was created to assist FEMA recipients and subrecipients in complying with the federal requirements that procurements must meet in order for FEMA to reimburse eligible expenses. Importantly, this checklist is intended to provide general guidance only and does not provide a detailed explanation of the Federal procurement requirements – it is not intended to serve as legal advice and FEMA makes no guarantee that adherence to this checklist will result in full reimbursement of eligible expenses. To understand the requirements fully, the user should review the provisions of [2 C.F.R. § 200.317 – 326](#), which is the source of these requirements. FEMA’s in – depth guidance on these provisions can be found in its *Supplement to the Public Assistance Field Manual*. In addition, the user may review FEMA’s Field Manual, [Public Assistance Grantee and Subgrantee Procurement Requirements](#), which is available on the internet by searching for “FEMA Procurement Field Manual.” While the Field Manual was drafted to specifically address the Federal procurement standards that were in effect prior to 26 December 2014 ([44 C.F.R. § 13.36\(a\)-\(i\) – States, Local and Tribal Governments](#); and [2 C.F.R. § 215.40-48 – Institutions of Higher Education, Hospitals, and other Non-Profit Organizations](#)), many of the concepts are similar or identical in substance, and thus remains an excellent tool for navigating the current Federal procurement standards. If any questions arise, please contact your servicing attorney or legal counsel for assistance.

2 C.F.R. § 200.317 – 326 became effective on December 26, 2014. For disasters (and their associated projects) declared prior to that date, the relevant procurement standards can continue to be found in 44 C.F.R. § 13.36(a)-(i) (States, local and tribal governments) and 2 C.F.R. § 215.40-48 (Institutions of Higher Education, Hospitals, and Private Non-Profits)¹. As indicated above, while many of the concepts are similar or identical, there are some substantive differences between the old and the new standards. Accordingly, this checklist should not be used for procurements associated with declarations issued prior to 26 December 2014. Instead, see procurement standards Checklists 13.36 and 215².

¹ This includes projects associated with declarations issued prior to 26 December 2014, regardless of project start date. For example, if a disaster was declared on 1 November 2014, but contracting for a project under that declaration did not begin until 1 April 2015, then a State (or state agency/instrumentality) would still utilize the old procurement standards found at 44 C.F.R. § 13.36(a); local and tribal governments would follow § 13.36(b)-(i); and Institutions of Higher Education, Hospitals, and Private Non-Profits would use 2 C.F.R. §§ 215.40-48.

² 2 C.F.R. §200.110 provides prospective applicants with the option of exercising a “grace period,” which allows the prospective applicant to continue to use the old procurement standards at 13.36 or 215 for an additional two (2) fiscal years beginning on the first fiscal year after 26 December 2014. The fiscal year is based upon the prospective applicant’s own fiscal year. In order to utilize this exception, the prospective applicant is required to affirmatively elect its use through the documentation of this decision in its contract records.

Instructions: Each standard below is followed by a block for “Yes”, “No”, or in some cases, “Not applicable”. **Red font** is used to indicate the response which, if checked, indicates that the contract does not comply with federal requirements.

The term “non-Federal entity” (NFE) below refers to the entity that is conducting the procurement action (i.e., the state, local, or tribal government or private-non-profit entity).

1. Does the procurement comply with the State’s own procurement laws, rules, and procedures?
§200.317 **Yes** **No**
2. Does the procurement comply with the requirement to make maximum use of recovered/recycled materials? § 200.317, § 200.322. **Yes** **No** **N/A – work does not involve the use of materials (e.g., debris removal or other services)**
3. **Does the contract include the following clauses?**
 - a. If the contract amount exceeds \$150,000⁴, does it address **administrative, contractual, or legal remedies** in instances where contractors violate or breach contract terms, and provide for sanctions and penalties? **Yes** **No** **N/A**
 - b. If the contract amount exceeds \$10,000, does it address **termination for cause and for convenience, including the manner by which it will be effected and the basis for settlement?** **Yes** **No** **N/A**
 - c. If the contract is for construction, does it include the required **Equal Employment Opportunity clause**⁵? **Yes** **No** **N/A**
 - d. For construction contracts exceeding \$2,000 awarded under a Federal grant, does the contract include a **Davis-Bacon Act clause** and **Copeland “Anti-Kickback” Act clause**⁶ addressing prevailing wage rates? [Note that Public Assistance and Hazard Mitigation Grant Program contracts do NOT require these clauses.] **Yes** **No** **N/A**
 - e. If the contract amount exceeds \$100,000 and involves the employment of mechanics or laborers, does the contract include a **Contract Work Hours and Safety Standards clause**⁷? **Yes** **No** **N/A**
 - f. Rights to Inventions Made Under a Contract or Agreement⁸. **N/A**

³ See [Appendix II of 2 CFR part 200](#). See also, PDAT Field Manual, section IV.H for a detailed discussion of these clauses. Sample clauses and templates can be found in the [Required Contract Clauses 2 CFR 200.326 and 2 CFR Part 200 Appendix II](#).

⁴ \$150,000 is the current dollar threshold for the simplified acquisition threshold, as authorized by 41 U.S.C. § 1908.

⁵ The EEO clause can be found at [41 C.F.R. § 60-1.4\(b\)](#).

⁶ The clause may read as follows: Compliance with the Copeland “Anti-Kickback” Act

⁷ Must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation.

⁸ As FEMA does not award grants or subgrants associated with research and development projects, this contract clause is inapplicable

- g. If the contract or subgrant amount exceeds \$150,000, does the contract include clauses addressing the **Clean Air Act and the Federal Water Pollution Control Act**⁹? Yes No
 N/A
- h. Does the contract include mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. § 6201)? Yes No
- i. Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.
- ii. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as the FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.
- iii. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.
- i. Does the contract include a **Suspension and Debarment clause**¹⁰? Yes No¹¹
- j. Does the contract include an **Anti-Lobbying clause**¹²? Yes No
- i. For contracts exceeding \$100,000, have bidders submitted an Anti-Lobbying Certification?
 Yes No N/A
- k. *Does the contract include a clause requiring the contractor to maximize use of recovered/recycled materials?* Yes No N/A – work does not involve the use of materials (e.g., debris removal or other services)

If a State agency is awarding the contract, stop here. If the contract is being awarded by a local or tribal government, or private nonprofit entity, continue with the checklist.



⁹ The clause may read as follows: Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387), and will report violations to FEMA and the Regional Office of the Environmental Protection Agency (EPA).

¹⁰ See, PDAT Manual, pps. 99-100 for sample text.

¹¹ A prospective contractor that is listed on the government-wide Excluded Parties List System in the System for Award Management (www.SAM.gov) as suspended or debarred, **CANNOT** be awarded a contract funded with Federal assistance.

¹² See PDAT Manual, pgs. 127-129. The clause may read substantially as follows:

Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended). Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient.

4. General requirements¹³

- a. Does the procurement comply with the NFE's¹⁴ own procurement laws, rules, and procedures? §200.318(a) Yes No
- b. Does the NFE maintain contract oversight to ensure that contractors perform in accordance with the terms, conditions, and specifications of their contracts or purchase orders? §200.318(b) Yes No
- c. Does the NFE have - §200.318(c)(1):
- i. Written standards of conduct covering conflicts of interest and governing the actions of its employees engaged in the selection, award and administration of contracts?
 Yes No
 - ii. Any employee, officer, or agent participating in the selection, award, or administration of a contract supported by a Federal award that has an actual or apparent conflict of interest¹⁵? Yes No
 - iii. Any employee, officer, or agent that has solicited and/or accepted gratuities, favors, or anything of monetary value from contractors or parties to subcontracts¹⁶? Yes No
 - iv. Written standards of conduct that provide for disciplinary actions to be applied for violations of such standards by officers, employees, or agents of the non-Federal entity.
 Yes No
- d. If the non-Federal entity has a parent, affiliate, or subsidiary organization that is not a state, local government, or Indian tribe, does the non-Federal entity have written standards of conduct covering organizational conflicts of interest? § 200.318(c)(2)¹⁷ Yes No N/A
- e. The NFE must avoid acquisition of unnecessary or duplicative items. Has the NFE considered consolidating or breaking out procurements to obtain a more economical purchase? Where appropriate, has the NFE considered lease versus purchase alternatives?
§ 200.318(d) Yes No
- f. Is the contract being awarded to a responsible contractor possessing the ability to perform successfully under the terms and conditions of the proposed procurement, giving consideration to such matters as contractor integrity, compliance with public policy, record of past performance, and financial and technical resources? § 200.318(h) Yes No

¹³ [See, 2 C.F.R. § 200.318](#)

¹⁴ Non-Federal Entity (NFE)

¹⁵ Such a conflict of interest would arise when the employee, officer, or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated herein, has a financial or other interest in or a tangible personal benefit from a firm considered for a contract.

¹⁶ However, NFEs may set standards for situations in which the financial interest is not substantial or the gift is an unsolicited item of nominal value.

¹⁷ Organizational conflicts of interest means that because of relationships with a parent company, affiliate, or subsidiary organization, the NFE is unable or appears to be unable to be impartial in conducting a procurement action involving a related organization.

- g. Is the NFE keeping records sufficient to detail the history of the procurement, including, but not limited to, records documenting the rationale for the method of procurement, selection of contract type, contractor selection or rejection, and the basis for the contract price?
§ 200.318(i) Yes No
- h. Is the contract a time-and-materials contract¹⁸? § 200.318(j) Yes No
- i. If so, has the NFE documented why no other contract is suitable? Yes No
- ii. Does the contract include a ceiling price that the contractor exceeds at its own risk?
 Yes No
- i. Is the NFE alone responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements? §200.318(k) Yes No
- j. Encouraged, but not required standards at § 200.318(e), (f), and (g).¹⁹

5. **Competition:**

- a. All procurement transactions must be conducted in a manner providing full and open competition consistent with the standards of this section. Does the procurement involve any of the following²⁰ § 200.319(a):
- i. Placing unreasonable requirements on firms in order for them to qualify to do business?
 Yes No
- ii. Requiring unnecessary experience and excessive bonding? Yes No
- iii. Noncompetitive pricing practices between firms or between affiliated companies²¹?
 Yes No
- iv. Noncompetitive contracts to consultants that are on retainer contracts²²? Yes No
- v. Organizational conflicts of interest²³? Yes No
- vi. Specifying only a “brand name” product instead of allowing “an equal” product to be offered and describing the performance or other relevant requirements of the procurement? Yes No

¹⁸ Time and materials type contract means a contract whose cost to a non-Federal entity is the sum of: (i) The actual cost of materials; and (ii) Direct labor hours charged at fixed hourly rates that reflect wages, general and administrative expenses, and profit. Because this formula generates an open-ended contract price, a time-and-materials contract provides no positive profit incentive to the contractor for cost control or labor efficiency. Therefore, a time-and-materials contract must set a ceiling price that the contractor exceeds at its own risk. Further, the non-Federal entity awarding such a contract must assert a high degree of oversight in order to obtain reasonable assurance that the contractor is using efficient methods and effective cost controls. [Note that FEMA previously reimbursed costs under a time-and-materials contract for only the first 70 hours of work performed. See, FEMA PA Guide (2007 ed.), pg. 53. However, FEMA’s new Public Assistance Guide, published on 1 January 2016, has eliminated this requirement and replaced it with a reasonable period of time standard. Please engage your FEMA Public Assistance POC for additional information]

¹⁹ §200.318(e) – to foster greater economy and efficiency, the NFE is encouraged to enter into state and local intergovernmental agreements or inter-entity agreements where appropriate for procurement or use of common or shared goods and services (this section provides the authority for state schedule and mutual aid agreements, for example); §200.318(f) – NFEs are encouraged to use Federal excess and surplus property in lieu of purchasing new equipment and property whenever such use is feasible and reduces project costs; and §200.318(g) – NFEs are encouraged to use value engineering clauses in contracts for construction projects (value engineering is a systematic and creative analysis of each contract item or task to encourage the contractor to develop more cost effective means to produce or procure requirements.).

²⁰ This list is non-exclusive and only serves as an example of some of the types of situations that are considered to be restrictive of competition.

²¹ For example, bid suppression or bid rigging

²² For example, out-of-scope disaster work added to the consultant’s work on retainer

²³ See, fn 18.

- vii. Any arbitrary action in the procurement process? **Yes** **No**
- b. Was the contractor that is bidding on the contract also involved with developing or drafting the specifications, requirements, statement of work, invitation for bids or request for proposals? (If so, that contractor must be excluded from competing for such procurements) § 200.319(a) **Yes** **No** N/A
- c. *Does the contract include a state or local geographic preference for local contractors?*²⁴ § 200.319(b) **Yes** **No**
- d. Do the NFE's written procurement procedures ensure that all solicitations comply with the following: § 200.319(c)
 - i. Incorporate a clear and accurate description of the technical requirements for the material, product, or service to be procured? § 200.319(c)(1) **Yes** **No**
 - ii. Identify all requirements which the offerors must fulfill and all other factors to be used in evaluating bids or proposals? § 200.319(c)(2) **Yes** **No**
- e. If the NFE is using a prequalified list of persons, firms, or products which are used in acquiring goods and services: § 200.319(d) E N/A
 - i. Is the list current? **Yes** **No**
 - ii. Does the list include enough qualified sources to ensure maximum open and free competition? **Yes** **No**
 - iii. Were any potential bidders precluded from qualifying during the solicitation period?²⁵ **Yes** **No**

6. **Method of Procurement**

- a. Is the NFE using one of the following acceptable methods of procurement? § 200.320
 - i. **Micro-purchase** (i.e., purchases below \$3,500, see, §200.67 Micro-purchases). § 200.320(a) **Yes** **No**
 - 1. [Note: Micro-purchases may be awarded without soliciting competitive quotations if the non-Federal entity considers the price to be reasonable.]
 - 2. To the extent practicable, is the NFE distributing micro-purchases equitably among qualified suppliers? **Yes** **No** **N/A – not practicable**
 - ii. **Small purchase procedures** § 200.320(b) **Yes** **No**
 - 1. [Note: Small purchase procedures are those relatively simple and informal procurement methods for securing services, supplies, or other property that do not

²⁴ Geographic preferences are generally not allowed under FEMA grants. The only exception is that when contracting for architectural and engineering (A/E) services, geographic location may be a selection criterion provided its application leaves an appropriate number of qualified firms, given the nature and size of the project, to compete for the contract.

²⁵ Pre-qualified lists are NOT contracts. Accordingly, once the decision to solicit and award a contract is made, the NFE may issue the solicitation directly to the contractors on the pre-qualified list, but must also allow any interested contractor (not on the pre-qualified list) to submit its qualifications, and if deemed qualified, allow that contractor to submit a bid or proposal in response to the solicitation. Contract award will then be made to one of the contractors submitting a bid or proposal, IAW the evaluation/award criteria identified in the solicitation.

cost more than the **lesser** of either (1) the federal small purchase threshold (i.e., \$150,000), or (2) whatever amount State or local procurement rules set as the small purchase threshold – *if more restrictive than the federal threshold.*]

2. Did the NFE obtain price or rate quotations from an adequate number of qualified sources?²⁶ **Yes** **No**

iii. **Sealed bids** § 200.320(c)²⁷ **Yes** **No**

1. [Note: Bids are publicly solicited, and a firm fixed price contract (lump sum or unit price) is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest in price. Sealed bidding is the preferred method for procuring construction]
2. Are *all* of the following conditions to use sealed bidding present? § 200.320(c)(1)
 Yes **No**
- a) A complete, adequate, and realistic specification or purchase description is available **Yes** **No**
- b) Two or more responsible bidders are willing and able to compete effectively for the business **Yes** **No**
- c) The procurement lends itself to a firm fixed price contract and the selection of the successful bidder can be made principally on the basis of price **Yes** **No**
- d) *If sealed bids are used*, the following requirements apply: § 200.320(c)(2)
- 1) Did the NFE solicit bids from an adequate number²⁸ of known suppliers, providing them sufficient response time prior to the date set for opening the bids? **Yes** **No**
- 2) If the NFE is a local or tribal government, was the invitation for bids publicly advertised? **Yes** **No** **N/A**
- 3) Did the invitation for bids include any specifications and pertinent attachments, and define the items or services in order for the bidder to properly respond? **Yes** **No**
- 4) Did the NFE open all bids at the time and place prescribed in the invitation for bids? **Yes** **No**
- 5) For local and tribal governments, were the bids opened publicly?
 Yes **No** **N/A**
- 6) Did the NFE award a firm fixed price contract award in writing to the lowest responsive and responsible bidder? **Yes** **No**
- 7) If any bids were rejected, was there a sound documented reason supporting the rejection? **Yes** **No** **N/A**

²⁶ FEMA has determined that for simplified purchase procedures, an adequate number of qualified sources is considered to be three (3). See, [FEMA Recovery Fact Sheet 9580.212 – Public Assistance Grant Contracting Frequently Asked Questions \(FAQ\)](#), FAC No. 3 and the PDAT Field Manual.

²⁷ Sealed bidding is generally used where price is the most important evaluation factor for the NFE. Accordingly, contract award under the sealed bidding method of procurement is made to the bidder submitting *the lowest priced, responsive and responsible bid*. “Responsive” refers to whether the bidder meets all the material requirements of the Invitation for Bid (IFB), while “Responsibility” is described at § 200.318(h).

²⁸ Unlike, for simplified purchase procedures, FEMA has not defined an “adequate number” of known sources under the sealed bidding method. While left undefined, a NFE is likely to meet this requirement through the application of “full and open competition.” (See fn. 27)

iv. **Procurement by competitive proposals**²⁹ § 200.320(d) **Yes** **No**

1. [Note: The technique of competitive proposals is normally conducted with more than one source submitting an offer, and either a fixed price or cost-reimbursement type contract is awarded. It is generally used when conditions are not appropriate for the use of sealed bids.]
2. Did the NFE publicize the Requests for Proposals (RFPs) and identify all evaluation factors and their relative importance? **Yes** **No**
3. Did the NFE solicit proposals from an adequate number of qualified sources?³⁰
 Yes **No**
4. Did the NFE have a written method for conducting technical evaluations of the proposals received and for selecting recipients? **Yes** **No**
5. Did the NFE award the contract to the responsible firm whose proposal is most advantageous to the program, with price and other factors considered? **Yes** **No**
6. [Note regarding architectural/engineering (A/E) professional services: The NFE may use competitive proposal procedures for qualifications-based procurement of A/E professional services whereby competitors' qualifications are evaluated and the most qualified competitor is selected, subject to negotiation of fair and reasonable compensation. **The method, where price is not used as a selection factor, can only be used in procurement of A/E professional services. It cannot be used to purchase other types of services through A/E firms that are a potential source to perform the proposed effort.**]

v. **Noncompetitive proposals** § 200.320(f)³¹ **Yes** **No**

1. [Note: Procurement by noncompetitive proposals is procurement through solicitation of a proposal from only one (or an improperly limited number of) source(s)]
2. Do one or more of the following circumstances apply? **Yes** **No**
 - a) The item is available only from a single source **Yes** **No**
 - b) The public exigency or emergency³² for the requirement will not permit a delay resulting from competitive solicitation **Yes** **No**
 - c) The Federal awarding agency or pass-through entity expressly authorizes noncompetitive proposals in response to a written request from the non-Federal entity **Yes** **No**

²⁹ Whereas contract awards under sealed bidding are focused on selecting the lowest responsive responsible bid, NFEs under the competitive procurement method may prioritize non-price factors, such as technical capability or past performance, over price and therefore award a contract to a contractor whose proposal is more expensive but reflects a better overall value to the NFE (e.g. “best value” contracting).

³⁰ Unlike, for simplified purchase procedures, FEMA has not defined an “adequate number” of qualified sources under the competitive procurement method. While left undefined, a NFE is likely to meet this requirement through the application of “full and open competition.”

³¹ § 200.320(e) is reserved.

³² For an explanation of what “emergency” and exigency” mean, see PDAT Field Manual, pg. 68.

- d) After solicitation of a number of sources, competition is determined inadequate.³³
 Yes No

7. **Contracting with Small and Minority Businesses, Women's Business Enterprises, and Labor Surplus Area Firms**

- a. Has the NFE taken the following affirmative steps³⁴ to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible?³⁵
§ 200.321 Yes No N/A (document)
- i. Placing qualified small and minority businesses and women's business enterprises on solicitation lists? Yes No N/A (document)
- ii. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources?
 Yes No N/A – no potential sources (document)
- iii. Dividing total requirements, *when economically feasible*, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises?³⁶ Yes No N/A – not economically feasible (document)
- iv. Establishing delivery schedules, *where the requirement permits*, which encourage participation by small and minority businesses, and women's business enterprises? Yes No N/A – the requirement does not permit (document)
- vi. Using the services and assistance, *as appropriate*, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce Yes No N/A – not appropriate (document)
- vii. Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed above? Yes No N/A – no subcontracts will be let (document)

8. **Contract cost and price**³⁷

- a. *If the contract amount (including contract modifications) exceeds \$150,000*, did the NFE perform a cost or price analysis? § 200.323(a) Yes No N/A

³³ Before utilizing this exception, Applicants should review their solicitation and the publicizing of their solicitation to ensure that it was not inadvertently drafted in a manner to reduce or eliminate competition, which resulted in the receipt of one or no proposals. If this is found to be the case, the Applicant should revise the solicitation and re-publicize the solicitation in order to resolve the competitive concerns.

³⁴ The following affirmative steps are non-exclusive; while these steps must be taken, additional steps, as determined by the NFE, local, state, or tribal government regulations or procedures, may also be taken.

³⁵ Collectively referred to as “socioeconomic contractors” or “socioeconomic contracting,” this requirement does not impose an obligation to set aside either the solicitation or award of a contract to these types of firms; this requirement only imposes an obligation to carry out and document the six identified affirmative steps. Failure to do so has been frequently identified as a justification to de-obligate funding by the Department of Homeland Security (DHS), Office of Inspector General (OIG).

³⁶ This is not the same as breaking a single project down into smaller components in order to circumvent the micro-purchase or small purchase thresholds to utilize their streamlined acquisition procedures (e.g. “project splitting.”)

³⁷ See, [Pricing Guide for Recipients and Subrecipients Under the Uniform Rules](#) for guidance on cost or price analysis.

- b. Did the NFE negotiate profit as a separate element of the price for each contract in *which there is no price competition and in all cases where cost analysis is performed?* § 200.323(b)
 Yes No N/A
- c. Is the contract a “cost plus a percentage of cost” or “percentage of construction cost” contract?³⁸ [Note: This form of contract is prohibited under the Federal procurement standards and is ineligible for FEMA reimbursement] Yes No

9. **Bonding requirements for construction or facility improvement contracts exceeding \$150,000**

- a. [Note: For construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold (i.e., \$150,000), the Federal awarding agency or pass-through entity may accept the bonding policy and requirements of the non-Federal entity provided that the Federal awarding agency or pass-through entity has made a determination that the Federal interest is adequately protected.]
- b. If such a determination (see above) has not been made, does the procurement include the following? Yes No N/A
 - i. A bid guarantee from each bidder equivalent to five percent of the bid price?
 Yes No N/A
 - 1. The “bid guarantee” must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.
 - ii. A performance bond on the part of the contractor for 100 percent of the contract price?
 Yes No N/A
 - 1. A “performance bond” is one executed in connection with a contract to secure fulfillment of all the contractor’s obligations under such contract.
 - iii. A payment bond on the part of the contractor for 100 percent of the contract price.
 Yes No N/A
 - 1. A “payment bond” is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

END OF CHECKLIST

³⁸ This type of contract is separate and distinct from cost plus fixed fee, cost plus incentive fee, and cost plus award fee type contracts, which are permissible and used to incentivize contractors to perform to a higher standard of quality, lower cost, or faster performance. Cost plus percentage of cost contracts on the other hand provide none of these incentives; instead, there is a reverse incentive for the contractor to increase its costs as the higher its costs go, the more profit it earns, as its potential earnings are uncapped. The following characteristics are suggestive of a prohibited cost plus percentage of cost contract: (1) payment is on a predetermined percentage rate; (2) the predetermined percentage rate is applied to actual performance costs; (3) the contractor’s entitlement is uncertain at the time of contracting; and (4) the contractor’s entitlement increases commensurately with increased performance costs.

Appendix E

**SAMPLE REQUEST FOR PROPOSAL FOR DISASTER
DEBRIS CLEARANCE AND REMOVAL SERVICES**

**Request for Proposals
Disaster Debris Clearance and Removal Services**

RFP NUMBER: XXXXXX

Proposal Deadline:

Date

Time

Request for Proposals
for
Disaster Debris Clearance and Removal Services

Introduction

FEMA encourages municipalities to identify disaster debris clearance and removal service providers prior to an emergency. With this in mind, the [Municipality] wishes to contract with one or more firms to provide services related to collection, reduction, recycling, hazardous waste management, demolition, processing, hauling, and final disposition of disaster-related debris. If the [Municipality] activates more than one firm after a disaster, firms will be assigned clear territories (via dividing the [Municipality] into grids) for their work to be performed and firms will need to contain their work to their assigned areas.

SECTION 1: PROPOSAL OUTLINE AND CONTENT

To simplify the review process and to obtain the maximum degree of comparability, the proposal must follow the outline set forth below and, at a minimum, contain the information requested. Proposers are encouraged to include additional relevant information. At Proposers discretion, brochures may accompany required proposal materials; however, brochures will not be considered as substitution for other written requirements.

1.1 Proposal Format

The proposal must be typewritten and the original clearly marked and signed in blue ink. Legibility, clarity, and completeness are important and essential. Proposals must include labels that identify the sections of the proposal.

1.2 Letter of Transmittal

The letter of transmittal should be limited to two (2) pages and should include:

- 1.2.1 A brief statement of the Proposer's understanding of the work to be done.
- 1.2.2 The names, titles, addresses, and telephone numbers of the individuals who are authorized to make representations on behalf of the Proposer.
- 1.2.3 A statement that (1) the person signing the transmittal letter is authorized to legally bind the Proposer, (2) the proposal shall remain firm for a period of 180 days from the date of receipt of best and final offers, and (3) the proposal will comply with the requirements of this Request for Proposal (RFP).
- 1.2.4 A statement indicating which vendor, if multiple vendors are proposing jointly, intends to act as prime point of contact for proposal evaluation questions and the delivery and maintenance of the vendor's proposed offerings.

1.3 Title Page

The title page should include the RFP subject and RFP number, the name and address of the Proposer, and the date of the proposal submission.

1.4 Table of Contents

The contents should be identified by section, description, and page number.

1.5 Certificate of Registration

The Proposer must furnish a *Certificate of Registration* that identifies that the Proposer is authorized to conduct business in the State of New York prior to the awarding of the contract.

1.6 Capabilities and Related Experience

Please provide a description of your organization's related experience and capabilities including a list of all projects completed within the last 2 years to include client references for each. Each Proposer must also provide a list of **all** debris removal, reduction, and disposal operations in excess of [#####] cubic yards within the last 10 years where the Proposer was the prime contractor and provide references for the communities where these

operations took place. Each reference must include jurisdiction name, contact name, e-mail address, phone number, and description of project. Proposers that do not meet these minimum qualifications will not be considered.

1.7 Qualifications of Key Personnel

Proposers must provide a listing of key personnel who would be assigned to the project, including their training (including FEMA courses/training completed), certifications, and years of experience. Proposers should also indicate which personnel will be primary contacts, which will be dedicated staff, and what role each staff member will play in execution of the contracted services.

1.8 Description of Work

Detailed requirements for describing the work to be performed, scope of services, and proposed costs are provided throughout this RFP.

1.9 Technical Proposal

Proposers should, at a minimum, provide the following information in the order listed below:

- 1.9.1 Proposer background, with specific detail regarding work on similar projects performed in excess of [#####] cubic yards
- 1.9.2 Proposer technical experience regarding large-scale debris removal operations associated with hurricanes/tropical storms, tornadoes, flooding, or other natural or manmade disasters
- 1.9.3 Organizational chart including proposed points of contact and a full-time project manager required to report to the [Municipality]
- 1.9.4 Public information plan, including proposal of a Public Information Representative provided by the Proposer to interface with the [Municipality's] Public Information Officer
- 1.9.5 Training (including FEMA courses/training) and professional experience (include all professional certifications) of proposed staff
- 1.9.6 List of existing contracts, particularly those within the State of New York
- 1.9.7 References from existing contracts and/or past clients (must include references from the successful completion of debris removal projects in excess of [#####] cubic yards) within the past 10 years
- 1.9.8 List of Sub-Contractors, including primary operating location(s)
- 1.9.9 One to two-page company profile with a brief description of the firm, capabilities, experience, contact information, website, and additional resources
- 1.9.10 Detailed listing of Proposer's equipment and resources highlighting equipment directly owned by the proposer
- 1.9.11 Mobilization and Operations Plan
- 1.9.12 Construction drawings for Occupational Health and Safety Administration (OSHA)-compliant temporary inspection towers
- 1.9.13 Anti-collusion statement

- 1.9.14 Proposer's equipment and resource list with on-site and off-site equipment that will be available at the collection site or facility, including all fire prevention, safety, personal protective equipment (PPE), and other equipment that the Proposer determines suitable or necessary for the project.
- 1.9.15 Spill and Fire Prevention Plans tailored to on-site activities at the debris management site (DMS) or facility.
- 1.9.16 Contingency Plan, including a format for a contingency plan, a description of notification procedures to the participants of on-site emergencies, and evacuation plan for the participants in case of an emergency on site.
- 1.9.17 Employee Training Plan and detailed training outline for each position involved in debris removal and DMS(s) operations. Proposers should include copies of any training manuals.
- 1.9.18 Health and Safety Plan
- 1.9.19 Description of Proposer's Safety Record, including a listing of all warning notifications, violations, and/or citations received from pertinent federal and/or state agencies in the past three (3) years by the Proposer.
- 1.9.20 Third-Party Certification, including a listing of all third-party certifications such as ISO 9000 Series, ISO 14000 Series.

1.10 Safety

Proposer shall be solely responsible for maintaining safety at all work sites. Proposer shall take all reasonable steps to ensure safety for both workers and visitors to the site(s) to include traffic control. Proposer will be solely responsible to ensure that all OSHA requirements are met and a safety officer is assigned to the project for the duration of this contract.

1.11 Indemnification

In order to protect [Municipality] from liabilities associated with on-site activities, transportation, and inherent Comprehensive Environmental Response Compensation and Liability Act (CERCLA) liabilities involving disposal, the Proposer should supply its own labor and transportation, and dispose of waste at only U.S. Environmental Protection Agency (EPA)-permitted disposal facilities. The Proposer must agree to assume generator status and be responsible for preparing and signing all manifests related to the [Municipality's] household hazardous collection and/or disposal facility.

Proposer agrees to and shall defend, indemnify, and hold [Municipality], their employees, officers, and legal representatives (collectively, [Municipality]) harmless for all claims, causes of action, liabilities, fines, and expenses (including, without limitation, attorney's fees, court costs, and all other defense costs and interest), for injury, death, damage, or loss to persons or property sustained in connection with or incidental to performance under this Agreement, including, without limitation, those caused by:

1. Proposer's and/or its agents', employees', officers', directors', or Proposers Sub-Contractors' actual or alleged negligence or intentional acts or omissions;
2. [Municipality's] and Proposer's actual or alleged concurrent negligence, whether Proposer is immune from liability or not; and

3. [Municipality's] and Proposer's actual or alleged strict products liability or strict statutory liability, whether Proposer is immune from liability or not.

Proposer shall defend, indemnify, and hold [Municipality] harmless during the term of this Agreement and for four (4) years after this Agreement terminates. Proposer shall not indemnify [Municipality] for [Municipality's] sole negligence.

1.12 Release

Proposer, its predecessors, successors, and assigns hereby release, relinquish, and discharge [Municipality], its agents, employees, officers, and legal representatives from any liability arising out of [Municipality's] sole and/or concurrent negligence and/or [Municipality's] strict products liability or strict statutory liability for any injury, including death or damage to persons or property, where such damage is sustained in connection with or arising out of performance under this contract.

1.13 Insurance Requirements

Proposer shall obtain and maintain insurance coverage in effect during the term of this Agreement as set forth below and shall furnish certificates of insurance showing [Municipality] as an Additional Insured, in duplicate form, prior to the beginning of the Agreement. Each policy, except those for Worker's Compensation and Employer's Liability, must (1) name [Municipality] as Additional Insured parties on the original policy and all renewals or replacements, and (2) contain an endorsement that the policy is primary to any other insurance available to the Additional Insured with respect to claims arising under the Agreement. Proposer's failure to maintain the required insurance coverage at any time during the contract period may be grounds for [Municipality] to suspend the contract and to withhold payment until insurance coverage is satisfactory. The issuer of any policy shall have a certificate of authority to transact insurance business in the State of New York or have a Best's rating of at least A and a Best's Financial Size Category of Class VII or better, according to the most current edition of the Best's Key Rating Guide, Property-Casualty United States.

Standard insurance policies and minimum amounts required are as follows:

1. Commercial General Liability insurance for bodily and personal injury (including death) and property damage
 - a. Each occurrence not less than \$1,000,000
 - b. General aggregate not less than \$2,000,000
 - c. The coverage shall include (but not be limited to) personal injury liability, premises/operations, and products/completed operations
2. Worker's Compensation and Employer's Liability Insurance
 - a. Employers' Liability insurance of \$1,000,000 per occurrence
 - b. Worker's Compensation as required by statute

3. Automobile Liability (for vehicles Proposer uses in performing under the Agreement, including Employer's Owned, Non-Ownership, and Hired Auto Coverage) with broad pollution liability endorsement and MCS-90 endorsement
 - a. Combined Single Limit of \$1,000,000 per occurrence
4. Environmental Impairment Liability and/or Pollution Liability
 - a. \$3,000,000 per occurrence or claim and \$3,000,000 aggregate
5. Excess Liability
 - a. \$3,000,000 per occurrence and \$3,000,000 aggregate
6. Other Insurance
 - a. If requested by [Municipality], Proposer shall furnish adequate evidence of Social Security and Unemployment Compensation Insurance, to the extent applicable to Proposer's operations under the Agreement.

Defense costs are excluded from the face amount of the policy. Aggregate limits are per 12-month policy period unless otherwise indicated.

All of the insurance required to be carried by the Proposer hereunder shall be by policies that require on their face, or by endorsement, that the insurance carrier waive any rights of subrogation to recover against [Municipality] and shall give thirty (30) days written notice to [Municipality] before they may be cancelled or materially changed. Within such thirty (30)-day period, Proposer covenants that it will provide other suitable policies in lieu of those about to be cancelled or materially modified, or non-renewed, so as to maintain in effect the coverage required under the provisions hereof. Failure or refusal of the Proposer to obtain and keep in force the above-required insurance coverage shall authorize [Municipality], at its option, to terminate the Agreement at once. Proposer shall give written notice to [Municipality] within five (5) days of the date on which total claims by any party against Proposer reduce the aggregated amount of coverage below the amounts required by the Agreement.

Proposer shall pay all insurance premiums, and [Municipality] shall not be obligated to pay any premiums. Proposer shall be responsible for and bear any claims or losses to the extent of any deductible amounts and waives any claim it may have for the same against [Municipality].

If any part of the work is sublet, similar insurance shall be provided by or in behalf of the Sub-Contractor to cover their operations, and evidence such as insurance, satisfactory to [Municipality] shall be furnished by the Proposer. In the event a Sub-Contractor is unable to furnish insurance in the limits required under the Agreement, the Proposer shall endorse the Sub-Contractor as an Additional Insured on his policies excluding Worker's Compensation and Employer's Liability.

Only unaltered original insurance certificates endorsed by the underwriter are acceptable. Photocopies are unacceptable.

1.14 Financial Assurance

Proposer must submit the most current, unqualified, audited financial statement or SEC

Form 10K for the proposing organization. Proposals submitted without the most current certified financial statement or U.S. Securities and Exchange Commission (“SEC”) Form 10K shall be considered non-compliant with the RFP.

1.15 Performance Bonds

To ensure faithful performance, the Contractor shall provide to the [Municipality] and maintain a Proposal Bond in the sum of \$500,000 for the duration of the Agreement. The Contractor's Proposal Bond shall be due upon signing of the Contract by the Contractor.

- (a) In the event the Contractor is notified by the [Municipality] to commence disaster services in the form of a Notice to Proceed and Purchase Order (“PO”), the Contractor shall provide a Performance and Payment Bond to the [Municipality] within seven days. If the Performance and Payment Bond is not received within seven-days, the Contractor shall forfeit their Proposal Bond.
- (b) The Performance and Payment Bond shall be in an amount at least equal to the estimated price of the work in the PO as determined by the [Municipality] and in such form and with such securities are acceptable to the [Municipality]. The [Municipality] may require the Contractor to furnish other bonds, in such form and with such sureties as it may require. If the PO is increased by a change order, the Contractor shall be responsible to ensure that the Performance and Payment Bond has been amended accordingly and of copy of the amendment shall be provided to the [Municipality's] Debris Manager. The maximum amount of any Bond shall not exceed 10 million dollars.
- (c) A Performance and Payment Bond shall be issued for each PO. Performance and Payment Bonds must be maintained until the PO has been completed and approved by the [Municipality]. Upon the successful completion of PO work, the Performance and Payment Bonds shall be released by the [Municipality].
- (d) If the Surety on any bond furnished by the Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in the State of New York or it ceases to meet the requirements imposed by the [Municipality], the Contractor shall within five (5) calendar days substitute another Bond and Surety, both of which shall be acceptable to the [Municipality].
- (e) If the Contractor cannot obtain another bond and surety within (5) calendar days, the [Municipality] shall accept, and the Contractor shall provide an irrevocable letter of credit drawn on a New York bank until the bond and surety can be obtained.

1.16 Liquidated Damages

Should the Contractor fail to complete requirements set forth in this scope of work, the [Municipality] shall suffer damage. The amount of damage suffered by the [Municipality] is difficult, if not impossible to determine at this time, therefore the Contractor shall pay the [Municipality], as liquidated damages, the following:

- (a) The Contractor shall pay the [Municipality], as liquidated damages, \$5,000.00 per calendar day of delay to mobilize in the [Municipality] with the resources requested by the [Municipality], within seventy-two (72) hours of being issued a PO.
- (b) The Contractor shall pay the [Municipality], as liquidated damages, \$1,000.00 per load of disaster debris collected in the [Municipality] that is not disposed of at a [Municipality]

approved DMS or [Municipality] Designated Final Disposal Site. Application of liquidated damages does not release the Contractor of all liability associated with hauling and depositing material to an unauthorized location.

- (c) The Contractor shall pay the [Municipality], as liquidated damages, \$100.00 per incident where the Contractor fails to sufficiently clean collection site(s) so that no loose leaves and small debris in excess of one-bushel basket remain, no debris is left on the road surface and no single piece of debris larger than six (6) inches remains on site. Application of liquidated damages does not release the Contractor from the responsibility of sufficiently cleaning collection site(s).
- (d) The Contractor shall pay the [Municipality], as liquidated damages, \$500.00 per incident where the Contractor fails to repair damages that are caused by the Contractor. Application of liquidated damages does not release the Contractor from the responsibility of resolving, repairing or paying for damages.
- (e) If Contractor personnel, including their subcontractors, are documented collecting debris from areas that are not listed in a PO (e.g., private property, vacant lots, land clearing debris), then liquidated damages shall be assessed at \$1,000.00 per incident. An incident shall entail each individual property as identified by a property identification number.
- (f) If Contractor personnel, including its subcontractors, leave their assigned area prior to completion of the work specified in the PO, "cherry pick" debris within their assigned area or collect debris from outside of their assigned area, then liquidated damages shall be assessed at \$1,000.00 per occurrence. In the event of leaving an assigned area prior to completion of work specified in the PO, the liquidated damage shall be assessed at \$5,000.00 per day until work has resumed in the assigned area.
- (g) At each vegetative debris management site, if grinding is selected as a volume reduction alternative, the Contractor shall be required to grind a minimum of 200-300 cubic yards per hour per grinder during operating hours. The Contractor and [Municipality] may agree to a different rate if needed. The new established rate shall then be the performance standard for a specific PO. The minimum rate shall be achieved no later than the third calendar day after receipt of the mobilization PO. Liquidated damages shall be assessed at \$10,000.00 per calendar day for any day in which the minimum processing rate is not met, unless non-compliance is due to insufficient debris amounts being delivered to the site.
- (h) All work, including site restoration of debris management sites, prior to close-out shall be completed within 30 calendar days after receiving notice from the [Municipality] that the last load of debris has been delivered, unless the [Municipality] initiates additions or deletions to the agreement by written POs. Subsequent changes in completion times shall be equitably negotiated by both parties pursuant to applicable state and federal laws. Liquidated damages shall be assessed at \$2,000.00 per calendar day for any time over the maximum allowable time established.
- (i) All work for the collection of debris from public roads, rights-of-way and other areas as directed by the [Municipality] in POs shall be completed on or before the recorded completion date. Liquidated damages shall be assessed at \$5,000.00 per calendar day for any day in which the recorded completion date has not been achieved to the satisfaction of the [Municipality].

- (j) Failure of the Contractor to meet the required specifications listed in a PO or meet any deadline specified herein or listed in a PO shall result in liquidated damages as specified in each PO.

The amounts specified above are mutually agreed upon as reasonable and proper amount of damage the [Municipality] should suffer by failure of the Contractor to complete requirements set forth in the scope of work.

1.17 Contract term

The initial contract term will be for five (5) years with an optional three (3) year and two (2) year extension allowing for a ten (10) year total contract term. Prices will be reviewed at each optional renewal and increased if necessary based on review of the consumer price index.

1.18 Invoice Schedule

The Proposer will invoice the [Municipality] for work completed no more frequently than every two weeks.

1.19 Retainage

The [Municipality] will hold a 10% retainage on all Proposer invoices until satisfactory completion of the project and resolution of all damages.

SECTION 2: TERMS AND DEFINITIONS

Definitions of key terms used in this RFP are provided below.

2.1 Approved Final Disposal Site

- 2.1.1 A final disposal site approved in writing by the [Municipality].

2.2 Authorized Representative

- 2.2.1 [Municipality] employees and/or contracted individuals designated by the [Municipality] or [Municipality] debris manager.

2.3 Cleanup Crew

- 2.3.1 A group of individuals or an individual employed by Proposer to collect disaster debris.

2.4 Construction and Demolition (C&D) Debris

- 2.4.1 Federal Emergency Management Agency (FEMA) Publication 104-009-2, Public Assistance Program and Policy Guide, defines eligible C&D debris as damaged components of buildings and structures, such as lumber and wood, gypsum wallboard, glass, metal, roofing material, tile, carpeting and other floor coverings, window coverings, pipe, concrete, asphalt, equipment, furnishings, and fixtures. (Note: This definition of C&D debris is for disaster recovery purposes and is not the same definition commonly used in other solid waste documents.) Current eligibility criteria include the following:

- a. Debris must be located within a designated area and be removed from an eligible applicant's improved property or right-of-way (ROW).
- b. Debris removal must be the legal responsibility of the applicant.

- c. Debris must be a result of a major disaster.

2.5 Debris

- 2.5.1 Items and materials broken, destroyed, or displaced by a natural or human-caused federally declared disaster. Examples of debris include but are not limited to trees, C&D debris, and personal property.

2.6 Debris Management Site (DMS)

- 2.6.1 A location to temporarily store, reduce, segregate, and/or process debris before it is hauled to a final disposal site. May also be referred to as a temporary debris management site (TDMS) or temporary debris storage and reduction site (TDSRS) or temporary debris staging and processing facility (TDSPPF).

2.7 Debris Manager

- 2.7.1 The [Municipality] will designate a debris manager, who will provide oversight for all phases of debris removal operations.

2.8 Debris Removal

- 2.8.1 Picking up debris and taking it to a DMS, composting facility, recycling facility, permitted landfill, or other reuse or end-use facility.

2.9 Demolition

- 2.9.1 The act or process of reducing a structure, as defined by the State of New York or local code, to a collapsed state. It contrasts with deconstruction, which is the taking down of a building while carefully preserving valuable elements for reuse.

2.10 Description of Designated Area

- 2.10.1 The designated area for debris removal is bounded by [Municipality] limits and includes all public ROWs, easements, parks, and debris staging areas within the areas of the [Municipality]. The Proposer will remove debris from municipal roadways at the direction of the [Municipality]. The [Municipality] may also authorize the Proposer to remove debris from Non-[Municipality] roadways or other areas as directed in writing by the [Municipality].
- 2.10.2 All debris identified by [Municipality] shall be removed. Proposer shall make up to two complete passes through the [Municipality's] limits, removing all debris along each ROW. The [Municipality] may or may not require the Proposer to perform a third pass. Partial removal of debris piles is strictly prohibited. The Proposer shall not move from one designated area to another designated area without prior approval from the [Municipality] or its representative. Any eligible debris (such as fallen trees) that extends onto the ROW from private property shall be cut at the point where it enters the ROW, and the part of the debris that lies within the ROW shall be removed. The Proposer shall not enter onto private property during the performance of this contract unless specifically authorized in writing by the [Municipality].
- 2.10.3 Proposer shall deliver debris to DMS and final disposal sites that have been permitted to receive disaster debris and will adhere to all local, state, and federal regulations.

- 2.10.4 Debris shall be reasonably compacted into the hauling vehicle. No limbs or branches shall be allowed to protrude more than six (6) inches beyond the sides of the truck bed. Any debris extending above the top of the truck bed shall be secured in place to prevent it from falling off. Measures must be taken to prevent debris from blowing out of the hauling vehicle during transport to the disposal site.
- 2.10.5 All debris will be mechanically loaded. Hauling vehicles that are hand-loaded or that require mechanical assistance for dumping will not be permitted to dump at DMS(s), unless approved in advance by [Municipality].
- 2.10.6 Loose leaves and small debris in excess of one (1) bushel basket shall be removed within the designated area. No debris shall be left on the road surface. No single piece of debris larger than six (6) inches in any dimension shall be left on site. Hand crews and rakes will be required.
- 2.10.7 The Proposer will provide an on-site project manager to the [Municipality]. The project manager shall provide the [Municipality] with a telephone number at which the project manager can be reached throughout the project. The project manager will be expected to have daily meetings with [Municipality] representatives. Daily meeting topics will include (but will not be limited to) volume of debris collected, completion progress, local coordination, and damage repairs. [Municipality] may adjust the frequency of meetings. Proposer project manager must be available 24 hours-a-day, or as required by the [Municipality].
- 2.10.8 [Municipality] does not warrant or guarantee the availability or use of any final disposal sites. Proposer must coordinate directly with owners of all final disposal sites. All final disposal sites must be approved in writing by [Municipality].
- 2.10.9 Proposer will remain legally responsible for the handling, reduction, and final haul-out and disposal of all reduced and unreduced debris from DMS sites. Payment for disposal costs (such as tipping fees) incurred by the Proposer at permitted disposal facilities, or other [Municipality]-approved sites that meet local, state, and federal regulations for disposal, will be made at the cost incurred by the Proposer. The Proposer must furnish a copy of the invoice received by the disposal facility, all scale or load tickets issued by the disposal facility, and proof of Proposer payment to the disposal facility.
- 2.10.10 Proposer shall conduct the work so as not to interfere with the disaster response and recovery activities of federal, state, and local governments or agencies, or of any public utilities.
- 2.10.11 Proposer shall be capable of assembling, directing, and managing a workforce that can be fully operational in debris management operations in a maximum of seventy-two (72) hours or sooner, depending on the extent of the disaster. Operations must begin within seventy-two (72) hours of notification by the [Municipality]. Depending on the category of the event, the [Municipality] may request immediate mobilization.
- 2.10.12 Debris management activities reimbursed through federal disaster programs may occur in areas protected by the Endangered Species Act. For any project that requires a federal permit or receives federal funding is subject to Section 7 (see Section 2.13 Endangered Species Act). Proposer and [Municipality] will comply with the findings of the Section 7 Endangered Species Act consultation, if applicable.

2.11 Disaster-Specific Guidance (DSG)

2.11.1 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 by its numerical identification.

2.12 Eligible

2.12.1 Qualifying for and meeting the most current stipulated requirements (at the time the written Notice to Proceed is issued and executed by the [Municipality] to the Proposer) of the FEMA Public Assistance Grant Program, FEMA Publication 104-009-2 (additional information below), and all current FEMA fact sheets, guidance documents, and DSGs. Eligible also includes meeting any changes in definition, rules, or requirements regarding debris removal reimbursement as stipulated by FEMA during the course of a debris removal project.

2.13 Endangered Species Act

2.13.1 Section 7 of the Endangered Species Act, *16 U.S.C. § 1536(a)(2)*, requires all federal agencies to consult with the National Marine Fisheries Service for marine and anadromous species, or the U.S. Fish and Wildlife Service for fresh-water and wildlife, if they are proposing an action that may affect listed species or their designated habitat. *Action* is defined broadly to include funding, permitting, and other regulatory actions. (See *50 CFR 402.02*.)

2.13.2 Each federal agency is to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of a designated critical habitat. This is done through consultation. If such species may be present, the local government must conduct a biological assessment (BA) to analyze the potential effects of the project on listed species and critical habitat to establish and justify an effect determination (assistance and coordination may be available from the State of New York, especially with transportation projects). The federal agency reviews the BA, and if it concludes that the project may adversely affect a listed species or its habitat, it prepares a biological opinion. The biological opinion may recommend reasonable and prudent alternatives to the proposed action to avoid jeopardizing or adversely modifying the habitat.

2.14 FEMA Publication 104-009-2 Public Assistance Program and Policy Guide

2.14.1 This publication is specifically dedicated to the rules, regulations, and policies associated with public assistance programs and the debris removal process. Familiarity with this publication and any revisions can help a local government limit the amount of non-reimbursable expenses. The Public Assistance Program and Policy Guide provides the framework for the debris removal process authorized by the Stafford Act, including the following:

- a. Eliminating immediate threats to lives, public health, and safety.
- b. Eliminating immediate threats of significant damage to improved public or private property.

- c. Ensuring the economic recovery of the affected community to the benefit of the community at large.

2.15 Grinding

2.15.1 Reduction of disaster-related vegetative debris through mechanical means into small pieces to be used as mulch or fuel. Grinding may also be referred to as chipping or mulching.

2.16 Hazardous Hanging Limbs

2.16.1 A limb that poses significant threat to the public. The current eligibility requirements for hazardous hangers according to FEMA Publication 104-009-2 are:

- a. The limbs or branches extend over the public ROW;
- b. The broken limbs or branches measure two inches or larger in diameter at the point of breakage; and
- c. The limbs or branches are still hanging in a tree and threatening a public use area, e.g. trails, sidewalks, golf cart path.

2.17 Hazardous Leaning Tree

2.17.1 A tree is considered hazardous if its condition was caused by the disaster; it is an immediate threat to lives, public health and safety, or improved property; it has a diameter of six (6) inches or greater measured 4.5 feet above ground level; and one or more of the following criteria are met (according to FEMA Publication 104-009-2):

- a. The tree has a split trunk.
- b. The tree has a broken canopy.
- c. The tree is leaning at an angle greater than thirty (30) degrees.

2.18 Hazardous Stump

2.18.1 A stump is defined as hazardous and eligible for reimbursement if all of the following criteria are met. The current eligibility requirements for hazardous hangers according to FEMA Publication 104-009-2 are:

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

Loose stumps (not attached to the ground) and stumps under two feet in diameter measured 2 feet from the ground and meeting the criteria 2.18.1 (a) (c) and (d) above will be removed as ROW Vegetative Debris as outlined in Section 3.2.

2.19 Historic Preservation

2.19.1 In certain instances, debris operations may occur in designated areas (for example, DMS locations or private property) that are subject to historical preservation rules and regulations.

2.20 Household Hazardous Waste (HHW)

2.20.1 The Resource Conservation and Recovery Act defines hazardous waste as materials that are ignitable, reactive, toxic, corrosive, or meet other listed criteria. Examples of eligible HHW include items such as paints, cleaners, pesticides. The eligibility criteria for HHW are as follows:

- a. HHW must be located within a designated area and be removed from an eligible applicant's improved property or ROW.
- b. HHW removal must be the legal responsibility of the applicant.
- c. HHW must be a result of a major disaster.

2.20.2 The collection of commercial disaster-related hazardous waste is generally not eligible for reimbursement. Commercial hazardous waste will only be collected by Proposer with written authorization by [Municipality]. Hazardous waste must be disposed of in accordance with all rules and regulations of local, state, and federal regulatory agencies.

2.21 Monitor

2.21.1 Person that observes day-to-day operations of debris removal crews and provides documentation of contract line items as well as QA/QC of documentation completed in the field. FEMA sets forth guidelines for eligibility. Eligibility determinations are not complete until they are reviewed by QA/QC staff prior to the approval of invoices. Monitor and Proposer must work together to ensure eligible work is being performed meeting the [Municipality's] expectations and contractual requirements and complying with all applicable federal, state, and local regulations. May also be referred to as a field inspector.

2.22 Personal Protective Equipment (PPE)

2.22.1 Equipment worn to minimize exposure to a variety of hazards.

2.23 Recycling

2.23.1 The recovery or use of wastes as a raw material for making products of the same or different nature as the original product.

2.24 Refrigerant

2.24.1 Ozone-depleting compound that must be removed from white goods or other refrigerant-containing items prior to recycling or disposal.

2.25 Right-of-Entry (ROE)

2.25.1 As used by FEMA, the document by which a property owner confers to the [Municipality] or its Proposer or the U.S. Army Corps of Engineers the right to enter onto private property for a specific purpose without committing trespass.

2.26 Right-of-Way (ROW)

2.26.1 The portions of land over which facilities such as highways, railroads, or power lines are built. It includes land on both sides of the facility up to the private property line.

2.27 Scale/Weigh Station

2.27.1 A scale used to weigh trucks as they enter and leave a landfill. The difference in weight determines the tonnage dumped and a tipping fee is charged accordingly. It also may be used to determine the quantity of debris picked up and hauled.

2.28 Tipping Fee

2.28.1 A fee charged by landfills or other waste management facilities based on the weight or volume of debris dumped. May also be referred to as a disposal fee.

2.29 Used Electronics

2.29.1 End-of-life electronics (typically televisions, computers, and related components) that have been damaged by the disaster. May also be referred to as e-waste.

2.30 Vegetative Debris

2.30.1 Damaged and disturbed trees, tree limbs, bushes, shrubs, brush, untreated lumber, and wood products.

2.30.2 Remains of standing trees that are clearly damaged beyond salvage.

2.31 White Goods

2.31.1 As outlined in FEMA Publication 104-009-2, eligible white goods are defined as discarded household appliances such as refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, 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 qualified technicians can extract refrigerants from white goods before they can be recycled. The eligibility criteria for white goods are as follows:

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

SECTION 3: SCOPE OF WORK AND RATE SCHEDULE ITEMS

Proposer shall have the capacity to manage a major workforce with multiple Sub-Contractors and to cover the expenses of a major recovery prior to being paid by [Municipality]. Established management teams must be in place. Proposer shall have the resources to provide the equipment and personnel necessary to cover a disaster. Upon activation by the [Municipality], the Proposer must have the capability to have equipment and operators on site within 72 hours to respond to the incident. Proposer shall have experience in [##] debris removal, reduction, and disposal operations in excess of [####] cubic yards within the past ten (10) years where the Proposer was the prime Proposer.

It shall be Proposer's responsibility to load, transport, reduce, and properly dispose of all disaster-generated debris once [Municipality] issues a Notice to Proceed to Proposer, unless otherwise directed in writing by [Municipality]. The [Municipality] reserves the right to utilize one or more Proposer's to remove debris efficiently. The [Municipality] also reserves the right to utilize different contractors for various elements including, but not limited to, emergency road clearance, right of way debris removal, and DMS management.

It shall be Proposer's responsibility to load and transport debris according to the production rate schedule below.

- a. Up to [###] cubic yards 10 calendar days from Notice to Proceed (NTP).
- b. Up to [###] cubic yards 15 calendar days from NTP.
- c. Up to [###] cubic yards 30 calendar days from NTP.
- d. Up to [###] cubic yards 60 calendar days from NTP.
- e. Greater than [####] cubic yards after 60 calendar days, [###] cubic yards every 15 calendar days thereafter.
- f. The ability to be fully operational for the reduction and disposal of debris within 72-hours of initial NTP.

Payment for disposal costs (such as tipping fees) incurred by Proposer at a [Municipality]-approved final disposal site that meets local, state, and federal regulations for disposal will be reimbursed by [Municipality] as a pass-through cost. Prior to reimbursement by the [Municipality], Proposer must furnish an invoice in hard copy and electronic formats, all scale or load tickets issued by the disposal facility, and proof of Proposer payment to the disposal facility.

The scope of work under this contract includes the following elements:

3.1 Emergency Road Clearance

Under this contract, work shall consist of all labor, equipment, fuel, and miscellaneous costs necessary to clear and remove debris from [Municipality] roadways and waterways to make them passable immediately following a declared disaster. All roadways designated by the [Municipality] shall be clear and passable within a reasonable amount of time as overseen by the [Municipality]. What constitutes a reasonable period for emergency push operations will be defined by the [Municipality] at the time of a notice to proceed. This may include roadways in municipalities within the [Municipality]. Roadways will be cleared as directed by the [Municipality]. The Proposer shall assist the [Municipality] and its representatives in ensuring proper documentation of emergency road clearance activities by documenting the type of equipment and/or labor utilized (that

is, certification), starting and ending times, and zones/areas cleared. Services performed under this contract element will be compensated using a mutually agreed upon Hourly Labor and Equipment Price Schedule (Schedule 1).

3.2 ROW Vegetative Debris Removal

Under this contract, work shall consist of all labor, equipment, fuel, traffic control costs, toll costs, and other associated costs necessary to pick up and transport eligible disaster-related vegetative debris from the [Municipality] ROW to a [Municipality]-approved DMS or approved final disposal site in accordance with all federal, state, and local regulations.

- 3.2.1 Vegetative debris in the [Municipality] ROW is defined as debris resulting from a hurricane or other natural or human-caused disaster, which has been or will be placed along public ROWs, easements, [Municipality] parks, alleys, [Municipality] debris staging areas, and other areas as designated by the [Municipality].
- 3.2.2 For the purposes of this contract, eligible vegetative debris that is piled in immediate proximity to the actual legal street ROW and that is accessible from the ROW line with loading equipment (that is, not behind a fence or other physical obstacle) will be deemed to be on the ROW, and is to be removed.
- 3.2.3 Proposer will remove vegetative debris as directed by the [Municipality].
- 3.2.4 All Eligible debris will be removed from each location before proceeding to the next location, unless otherwise directed by [Municipality] or its authorized representative.
- 3.2.5 Proposer must provide traffic control as conditions require or as directed by the [Municipality].
- 3.2.6 Entry onto private property for the removal of Eligible vegetative debris will only be permitted when directed by the [Municipality] or its authorized representative. [Municipality] will provide specific ROE legal and operational procedures.

3.3 ROW C&D Debris Removal

Under this contract, work shall consist of all labor, equipment, fuel, traffic control costs, toll costs, and other associated costs necessary to pick up and transport eligible C&D debris from the [Municipality] ROW to a [Municipality]-approved DMS or final disposal site in accordance with all federal, state, and local regulations.

- 3.3.1 C&D debris in the [Municipality] ROW is defined as disaster-generated debris that has been or will be placed along public ROW, easements, [Municipality] parks, alleys, and [Municipality] debris staging areas.
- 3.3.2 For the purposes of this contract, Eligible C&D debris that is piled in immediate proximity to the ROW and that is accessible from the ROW line with loading equipment (that is, not behind a fence or other physical obstacle) will be deemed to be on the ROW, and is to be removed.
- 3.3.3 Proposer will remove C&D debris from the ROW as directed by the [Municipality].
- 3.3.4 Once the debris removal vehicle has been issued a load ticket from the [Municipality's] authorized representative, the debris removal vehicle will proceed immediately to a

[Municipality]-approved DMS or final disposal site as specified by the [Municipality]. The debris removal vehicle will not collect additional debris once a load ticket has been issued.

- 3.3.5 All Eligible debris will be removed from each location before proceeding to the next location, unless otherwise directed by the [Municipality] or its authorized representative.
- 3.3.6 Proposer must provide traffic control as conditions require or as directed by the [Municipality].
- 3.3.7 Entry onto private property for the removal of Eligible C&D debris will only be permitted when directed by the [Municipality] or its authorized representative. [Municipality] will provide specific ROE legal and operational procedures.
- 3.3.8 C&D debris must be monitored for the collection, complete haul, and delivery at the approved DMS or final disposal sites. [Municipality] or authorized representative will obtain the original copy of the disposal or scale ticket showing the inbound and outbound collection vehicle weights.

3.4 Demolition, Removal, Transport, and Disposal of Non-RACM Structures

Under this contract, work shall consist of all labor, equipment, fuel, traffic control costs, toll costs, and other associated costs necessary to decommission, demolish, and dispose of eligible non-regulated asbestos-containing material (non-RACM) structures on private property within the jurisdictional limits of the [Municipality]. Under this service, work will include asbestos-containing material (ACM) testing, decommissioning, structural demolition, debris removal, and site remediation. Further, eligible debris generated from the demolition of non-RACM structures, as well as scattered C&D debris on private property, will be transported to a [Municipality]-approved final disposal site in accordance with all federal, state, and local regulations.

- 3.4.1 Removal and transportation of demolished structures and scattered C&D debris on private property will be performed as identified by the [Municipality].
- 3.4.2 Entry onto private property will only be permitted when directed by the [Municipality]. [Municipality] will provide specific ROE legal and operational procedures.
- 3.4.3 Proposer is required to strictly adhere to all local, state, and federal regulations (such as obtaining demolition permits) for the demolition, handling, and transportation of non-RACM structures.
- 3.4.4 Decommissioning consists of the removal and disposal of all HHW, used electronics, white goods, and scrap tires from a non-RACM structure at a properly sanctioned facility in accordance with all applicable federal, state, and local regulations.
- 3.4.5 Any structurally unsound and unsafe structures will be identified and presented to the [Municipality] for direction regarding decommissioning.
- 3.4.6 Removal and transportation of eligible non-RACM demolished structures and eligible scattered C&D debris on private property will be performed as directed in writing by the [Municipality's] authorized representative.
- 3.4.7 Once the debris removal vehicle has been issued a load ticket from the [Municipality's] authorized representative, the debris removal vehicle will proceed immediately to a

[Municipality]-approved final disposal site. The debris removal vehicle will not collect additional debris once a load ticket has been issued.

- 3.4.8 Entry onto private property for the removal of eligible C&D debris will only be permitted when directed in writing by the [Municipality] or its authorized representative. [Municipality] will provide specific ROE legal and operational procedures for private property debris removal programs if requested.

3.5 Demolition, Removal, Transport, and Disposal of RACM Structures

Under this contract, work shall consist of all labor, equipment, fuel, traffic control costs, toll costs, and other associated costs necessary to decommission, demolish, and dispose of eligible RACM structures on private property within the jurisdictional limits of the [Municipality]. Under this service, work will include ACM testing, decommissioning, structural demolition, debris removal, and site remediation. Further, eligible debris generated from the demolition of structures, as well as eligible scattered C&D debris on private property, will be transported to a [Municipality]-approved final disposal site in accordance with all federal, state, and local regulations.

- 3.5.1 Proposer is required to strictly adhere to all local, state, and federal regulatory requirements (such as obtaining demolition permits, burrito wrapping of debris, etc.) for the demolition, handling, and transportation of RACM structures.
- 3.5.2 Decommissioning consists of the removal and disposal of all HHW, e-waste, white goods, and scrap tires from an RACM structure at a properly sanctioned facility in accordance with all applicable local, state, and federal regulations.
- 3.5.3 Any structurally unsound and unsafe structures will be identified and presented to the [Municipality] for direction regarding decommissioning.
- 3.5.4 Removal and transportation of eligible RACM demolished structures and eligible scattered C&D debris on private property will be performed as directed in writing by the [Municipality's] authorized representative.
- 3.5.5 Once the debris removal vehicle has been issued a load ticket from the [Municipality's] authorized representative, the debris removal vehicle will proceed immediately to a [Municipality]-approved final disposal site that accepts RACM debris. The debris removal vehicle will not collect additional debris once a load ticket has been issued.
- 3.5.6 Entry onto private property for the removal of eligible C&D debris will only be permitted when directed in writing by the [Municipality] or its authorized representative. [Municipality] will provide specific ROE legal and operational procedures for private property debris removal programs if requested.

3.6 DMS Management and Operations

Under this contract, work shall consist of all labor, equipment, fuel, traffic control costs, toll costs, and other associated costs necessary to manage and operate DMS(s) for the acceptance, management, segregation, staging, and reduction of disaster debris. Reduction methods must be approved by the [Municipality] prior to commencement of reduction activities. DMS layouts and ingress and egress plans must be approved by the [Municipality]. [Municipality] may provide Proposer with potential DMS(s). Proposer will

be responsible for documenting the condition of the sites prior to their use as DMS(s), and for returning the DMS(s) to their original condition, abiding by all state and federal environmental regulatory requirements, and the following:

- a. If [Municipality] DMS locations are identified, the Proposer will be provided with the address, Global Positioning System (GPS) coordinates, and estimated acreage of each DMS.
- b. Based on the severity of the disaster, [Municipality] may require Proposer to locate additional sites to be used as DMS(s). If private sites are identified to be leased, the Proposer may be tasked with executing the lease and could bill these costs to the [Municipality] as a pass-through cost.
- c. The Proposer will be responsible for conducting pre-condition baseline underground water and soil sampling and testing of DMS as well as comparable closeout sampling and testing.
- d. DMS(s) operations and remediation must comply with all local, state, and federal safety and environmental standards. Proposer reduction, handling, disposal, and remediation operations must be approved in writing by the [Municipality].

[Municipality] reserves the right to inspect the DMS(s), verify quantities, and review operations at any time.

- 3.6.1 Managing DMS location includes helping to obtain necessary local, state, and federal permits or approval and operating in accordance with all rules and regulations of local, state, and federal regulatory agencies, which may include but are not limited to the EPA, New York State Department of Environmental Conservation (NYS DEC), New York State Historic Preservation Office, or other State and County agencies. Proposer shall also be responsible for all costs associated with third-party groundwater and soil testing.
- 3.6.2 Debris at the DMS(s) will be clearly segregated and managed independently by debris type (C&D, vegetative, white goods, and other scope of service items), program (ROW collection, private property debris removal, etc.), as outlined in Section 2.10 Description of Designated Area.
- 3.6.3 Proposer is responsible for maintaining the DMS(s) approach and interior road(s) for all weather conditions for the entire period of debris hauling, including provision of crushed concrete for any roads that require stabilization for ingress and egress.
- 3.6.4 Proposer is responsible for all associated costs necessary to provide DMS(s) traffic control (for example, traffic cones and staff with traffic flags).
- 3.6.5 Proposer is responsible for all associated costs necessary to provide DMS(s) dust control and erosion control (for example, an operational water truck, silt fencing, and other best management practices).
- 3.6.6 Proposer is responsible for providing twenty-four (24)-hour security at DMS(s).
- 3.6.7 Proposer will only permit Proposer vehicles and others specifically authorized by the [Municipality] or its authorized representative on DMS locations.
- 3.6.8 Proposer is responsible for all associated costs necessary to provide DMS(s) utilities (for example, water, lighting, and portable toilets).

- 3.6.9 Proposer is responsible for all associated costs necessary to provide DMS(s) fire protection (for example, an operational water truck [sufficient and equipped for fire protection], fire breaks, and a site foreman).
- 3.6.10 Proposer is responsible for all associated costs necessary to provide qualified personnel, as well as lined containers or containment areas, for the segregation of visible HHW/contaminants that may be mixed with disaster debris. The cost associated with qualified personnel and lined containers/containment areas for HHW/contaminant segregation is reflected in this scope of work. The [Municipality] will be responsible for disposing of HHW/contaminant material segregated and stored in lined containers at the DMS(s)
- 3.6.11 Proposer shall provide tower(s) from which the [Municipality] or its authorized representative can make volumetric load calls. The tower provided by the Proposer will meet required minimum specifications, detailed in Section 3.20 Debris Site Tower Specifications.
- 3.6.12 Proposer is responsible for operating the DMS(s) in accordance with OSHA, EPA, and NYS DEC guidelines.
- 3.6.13 Upon completion of haul-out activities, the Proposer shall restore the site to its original condition prior to site use at their own expense, abide by all local, state, and federal environmental regulatory requirements, and obtain a written release from the [Municipality] or its authorized representative. Site remediation will include (but is not limited to) ensuring all debris, mulch, and other residual material is adequately removed, returning the original site grade and other physical features including sodding if necessary. Site remediation will also include returning all utilized sites to their original condition as verified through soil and groundwater samples. Site remediation will abide by all state and federal environmental regulatory requirements and is subject to final approval by the [Municipality] and NYS DEC. Site remediation does not include restoring fencing, concession stands, lighting, and other permanent structures that may have been demolished at the [Municipality's] direction for DMS(s) operations.

3.7 DMS Management and Reduction by Grinding

Under this contract, work shall consist of all labor, equipment, fuel, and miscellaneous costs necessary to reduce disaster debris by grinding. Reduction methods are at the discretion of the [Municipality]. Grinding must be approved by the [Municipality] prior to commencement of reduction activities.

- 3.7.1 All unreduced disaster debris must be staged separately from reduced debris at the DMS(s).
- 3.7.2 Grinding activities must begin within seven days of the opening of the DMS with adequate equipment available to process the type of debris entering the site and prevent stockpiling of excess debris at the DMS.
- 3.7.3 Proposer must obtain [Municipality's] approval to reduce C&D debris. If approved for reduction by the [Municipality], C&D debris must be reduced via grinding in order for the [Municipality] to compensate the Proposer for reduction. Incineration, mauling or driving over of C&D are not acceptable methods of C&D reduction.

3.8 DMS Management and Reduction by Incineration

Under this contract, work shall consist of all labor, equipment, fuel, and miscellaneous costs necessary to reduce disaster debris by incineration. Reduction methods (controlled open-air incineration and air curtain burning) are at the discretion of the [Municipality]. Incineration must be approved by the [Municipality] prior to commencement of reduction activities.

- 3.8.1 All unreduced disaster debris must be staged separately from reduced debris at the DMS(s).

3.9 Haul-Out of Reduced Debris from DMS to Final Disposal Site

Under this contract, work shall consist of all labor, equipment, fuel, traffic control costs, and associated costs necessary to load and transport reduced eligible material (such as ash, compacted C&D, or mulch) from a [Municipality]-approved DMS(s) to a [Municipality]-approved final disposal site in accordance with all local, state, and federal regulations.

- 3.9.1 All unreduced disaster debris must be transported to a final disposal site separately from reduced debris.
- 3.9.2 Proposer shall provide the name and address of each disposal site to be used along with the name and the telephone number of a responsible party for each site, prior to commencing the work.
- 3.9.3 Proposer shall not use any disposal site without the written consent of the [Municipality]. All costs and fees associated with the disposal of debris shall be reviewed for reasonableness by the [Municipality] prior to issuing any such authorization.
- 3.9.4 Proposer shall initiate and manage the execution of a written three-party agreement between the disposal site owner/operator, Proposer, and [Municipality] for permission to post a [Municipality] inspector at the site for verification of each load disposed.
- 3.9.5 Proposer shall provide a sufficient number of debris site towers and/or certified scales meeting [Municipality] specifications to provide for the efficient delivery of waste streams without excessive wait times. The [Municipality] shall decide what constitutes an excessive wait time. To the extent that the [Municipality] determines that additional towers and/or scales are required, additional towers must be operational within forty-eight (48) hours of the [Municipality's] request and certified scales must be operational within five (5) business days of the [Municipality's] request.
- 3.9.6 At the completion of disposal operations, each disposal site will issue a written summary of the quantity, type, and origin of waste delivered.
- 3.9.7 Proposer shall not receive any payment from the [Municipality] for haul-out or load tickets related to reduced or unreduced debris transported and disposed of at a final disposal site that was not approved by [Municipality].

3.10 Removal of Hazardous Leaning Trees and Hanging Limbs

Under this contract, work shall consist of all labor, equipment, fuel, traffic control costs, toll costs, and other associated costs necessary to remove all eligible hazardous leaning trees six (6) inches or greater in diameter, measured four and a half (4.5) feet from the base of the tree, and eligible hazardous hanging limbs two (2) inches or greater in diameter at

the point of the break and in the [Municipality] ROW. Further, debris generated from the removal of eligible hazardous leaning trees and eligible hazardous hanging limbs two (2) inches or greater in diameter at the point of the break and in the [Municipality] ROW will be placed in the safest possible location on the [Municipality] ROW and subsequently removed in accordance with Section 3.2 of this RFP. Eligible hazardous leaning trees less than six (6) inches in diameter, measured four and a half (4.5) feet from the base of the tree, will be flush cut, loaded, and removed in accordance with Section 3.2 of this RFP. The [Municipality] will not compensate the Proposer for cutting leaning trees less than six (6) inches in diameter on a unit rate basis. The collection of all eligible hazardous leaning trees and eligible hazardous hanging limbs must be performed on the same day as the cut work. If there is insufficient room for safe placement along the [Municipality] ROW, then the Proposer must load the resulting debris as eligible hazardous leaning trees or eligible hazardous hanging limbs as they are removed.

3.10.1 Eligible hazardous leaning trees will be identified by the [Municipality] or its authorized representative for removal. Removal and transportation of hazardous leaning trees six (6) inches or greater in diameter on the [Municipality] ROW or private property will be performed as identified by the [Municipality] or authorized representative. All disaster-specific eligibility guidelines regarding size and diameter of hazardous leaning trees will be communicated to the Proposer in writing by the [Municipality] or authorized representative. For hazardous leaning trees to be removed and eligible for reimbursement, the tree must satisfy a minimum of one (1) of the following requirements:

- a. The tree has a broken canopy.
- b. The tree has a split trunk.
- c. The tree has fallen or been uprooted within a public use area.
- d. The tree is leaning at an angle greater than thirty (30) degrees.

3.10.2 Eligible hazardous hanging limbs will be identified by the [Municipality] or its authorized representative for removal. Removal and placement of eligible hazardous hanging limbs two (2) inches or greater in diameter at the point of the break and on the [Municipality] ROW or private property will be performed as identified by the [Municipality's] authorized representative. All disaster-specific eligibility guidelines regarding size and diameter of limbs will be communicated to the Proposer in writing by the [Municipality's] authorized representative. For hazardous hanging limbs to be removed and eligible for payment, the limb must satisfy all of the following requirements:

- a. The limb is two (2) inches or greater in diameter at the point of the break.
- b. The limb is still hanging in a tree and threatening a public use area.
- c. The limb is located on improved public property.

3.11 Removal of Hazardous Stumps

3.11.1 Under this contract, work shall consist of all labor, equipment, fuel, traffic control costs, toll costs, and other associated costs necessary to remove all hazardous uprooted stumps two (2) feet or greater in diameter, measured 2 feet from the base of the tree, in the [Municipality] ROW. Any voids not backfilled immediately following hazardous stump removal must have measures taken in order to protect public health and safety. Further,

debris generated from the removal of eligible hazardous uprooted stumps in the [Municipality] ROW will be placed in the safest possible location on the ROW and subsequently removed in accordance with Section 3.2 of this RFP. Stumps measured two (2) feet from the base of the tree and less than two (2) feet in diameter will be considered normal vegetative debris and will be removed in accordance with Section 3.2 of this RFP. [Municipality] will not compensate Proposer for removing hazardous stumps less than two (2) feet in diameter on a unit rate basis and instead will be considered normal vegetative debris. The diameter of stumps less than two (2) feet will be converted into a cubic yardage volume based on the published FEMA Stump Conversion Table (see Attachment 1, FEMA Stump Conversion Table) and will be removed under the terms and conditions of Section 3.2 of this RFP.

3.11.2 Eligible hazardous stumps will be identified by the [Municipality] for removal. Removal and transportation of hazardous uprooted stumps in the [Municipality] ROW and private property will be performed as identified by the [Municipality]. All disaster-specific eligibility guidelines regarding size and diameter of hazardous stumps will be communicated to Proposer in writing by the [Municipality]. For hazardous stumps to be removed and eligible for reimbursement, the stump must satisfy the following requirements:

- a. Over fifty (50) percent of the tree crown is damaged or broken and heartwood is exposed.
- b. Fifty (50) percent or more of the root ball is exposed.
- c. The stump is on [Municipality] ROW and poses an immediate threat to public health, safety, or welfare.

3.11.3 Stumps that are not attached to the ground will be considered normal vegetative debris and will be subject to removal under the terms and conditions of Section 3.2. Stumps with less than fifty (50) percent of the root ball exposed shall be flush cut to the ground. The stump portion of the tree will not be removed but the residual debris (that is, tree trunk) will be removed under the terms and conditions of Section 3.2. The cubic yard volume of the unattached stump will be based on the diameter conversion using the published FEMA Stump Conversion Table (see Attachment 1, FEMA Stump Conversion Table).

3.11.4 The [Municipality] or its representative will measure and certify all stumps before removal.

3.11.5 Stumps shall only be collected after the [Municipality] and the Proposer document and perform the following:

- a. Location – Determine that the uprooted stump is located on improved public property or a public ROW. Record and document the location using photography, map depiction, and specific descriptive notations.
- b. Size – Measure and record the diameter of the stump to be removed at the appropriate location.
- c. Marking – Eligible stumps will be marked and uniquely numbered with green paint. Ineligible stumps will be marked with red paint.
- d. Stump Worksheet – Hazardous Stump Worksheet provided by the monitoring firm(s) will be completed in full for each stump to capture the

following information: (1) names and signatures of parties present; (2) physical location (street address, road cross streets, etc.); (3) stump number; (4) size of the stump; and (5) date of stump removal.

- 3.11.6 The unit stump price shall include (but not be limited to) stump extraction, stump cavity filling with compacted soils and installation of seed and/or sod, stump hauling, and stump reduction.

3.12 ROW White Goods Debris Removal

Under this contract, work shall consist of all labor, equipment, fuel, traffic control costs, toll costs, and other associated costs necessary for the collection of white goods from the ROW, removal of refrigerants, transportation to a [Municipality]-approved DMS, decontamination, and transportation to the [Municipality's] approved final disposal site.

- 3.12.1 White goods containing refrigerants must first have such refrigerants removed by the Proposer's qualified technicians prior to mechanical loading. White goods can be collected without first having refrigerants removed if the white goods are manually placed into a hauling vehicle with lifting equipment so that the elements containing refrigerants are not damaged.
- 3.12.2 The removal, transportation, and disposal of white goods includes obtaining all necessary local, state, and federal handling permits, and operating in accordance with all local, state, and federal regulatory agencies.
- 3.12.3 There are no disposal fees for residential white goods.

3.13 Used Electronics

Under this contract, work shall consist of all labor, equipment, fuel, traffic control costs, toll costs, and other associated costs necessary for the removal, transportation, and proper disposal of eligible used electronics from the ROW to the [Municipality]-approved final disposal site. Eligible used electronics includes (but is not limited to) disaster-damaged televisions, computers, computer monitors, and microwaves in areas identified and approved by the [Municipality]. Proposer shall recycle or dispose of all eligible used electronics in accordance with all local, state, and federal regulations.

3.14 Household Hazardous Waste Removal, Transport, and Disposal

Under this contract, work shall consist of all labor, equipment, fuel, traffic control costs, toll costs, and other associated costs necessary for the removal, transportation, and disposal of HHW.

- 3.14.1 The removal, transportation, and disposal of HHW includes obtaining all necessary local, state, and federal handling permits and operating in accordance with all local, state, and federal regulations.
- 3.14.2 The collection methods shall include collection vehicles supplied by the Proposer, which shall be capable of transporting HHW materials from the curb to the approved final disposal sites. All hazardous waste collection personnel shall wear Level D PPE and carry a means of communication (for example, cell phone or radio) for safety and operational purpose. Proposer personnel shall observe all applicable safety requirements for the handling of HHW in accordance with applicable regulations. All HHW shall be examined

prior to collection to ensure it is free of other more serious contaminants, including polychlorinated biphenyls. Such serious and non-qualifying non-HHW waste shall be noted and scheduled for separate recovery by the [Municipality] or Proposer as directed by the [Municipality]. Debris identified as HHW shall be collected and placed in poly bags for temporary storage during transport to the approved final disposal site.

3.14.3 Removal of HHW from DMS to approved final disposal site.

3.15 Abandoned Vessel and Vehicle Removal

Under this contract, work shall consist of all labor, equipment, fuel, traffic control costs, toll costs, and other associated costs necessary for the removal and haul-out of eligible vessels and vehicles in areas identified and approved by the [Municipality]. The removed eligible vehicles will be hauled to a [Municipality]-approved staging area and subsequently disposed of by the appropriate regulatory agency.

3.15.1 The removal, transportation, and disposal required for abandoned vessel and vehicle removal includes obtaining all necessary local, state, and federal handling permits and operating in accordance with all local, state, and federal regulations.

3.16 Animal Carcass Removal and Disposal

Under this contract, work shall consist of all labor, equipment, fuel, traffic control costs, toll costs, and other associated costs necessary for the removal, transportation, and lawful disposal of dead animal carcasses in areas identified and approved by the [Municipality] to an approved final disposal site. The carcasses will be hauled to a [Municipality]-approved staging area and subsequently disposed of by the appropriate regulatory agency.

3.16.1 The Proposer will coordinate activities with the appropriate local animal control agency.

3.16.2 The removal, transportation, and disposal of animal carcasses includes obtaining all necessary local, state, and federal handling permits and operating in accordance with all local, state, and federal regulations.

3.17 Other Debris Removal Work

Neither the Proposer nor any Sub-Contractor shall solicit work from private citizens or others to be performed in the designated work areas during the term of this Agreement. [Municipality] reserves the right to require Proposer to dismiss or remove from the project any workers as the [Municipality] sees necessary. Any debris removal vehicles dismissed from the project must have their issued placard removed and destroyed (additional information in Section 3.26 Documentation and Measurement).

3.18 Use of Local Resources

Proposer will be able to use their own Sub-Contractor resources to meet the obligations of the contract. FEMA encourages using local resources. The [Municipality] will establish the extent to which Proposer must use local resources. It is expected that the awarded Proposer will encourage at least thirty (30) percent of Sub-Contractors are resources located within the disaster area, including but not limited to procuring supplies and equipment, awarding subcontracts, and employing workmen at the [Municipality's] discretion. Proposer will provide a list of Sub-Contractors with proposal submission.

3.19 Working Hours

Working hours of this contract shall only be during daylight hours, Monday through Sunday, or as otherwise directed by the [Municipality]. No work outside these hours shall be allowed unless approved in advance by the [Municipality].

- 3.19.1 Proposer shall conduct debris removal operations that generate noise levels above that normally associated with routine traffic flow during daylight hours only. Work may be performed seven (7) days per week. Adjustments to work hours, as local conditions may dictate, shall be coordinated between the [Municipality] and the Proposer. Unless otherwise directed, the Proposer must be capable of conducting volumetric reduction operations at DMS locations on a twenty-four-(24)-hour, seven-(7)-day-a-week basis.

3.20 Debris Site Tower Specifications

Proposer shall provide as many towers as designated by the [Municipality] at each disposal site for the use of [Municipality] representatives during their inspection of dumping operations.

- 3.20.1 If ingress and egress of the DMS(s) is of significant distance that the [Municipality] or its authorized representative are unable to verify the entering and exiting trucks, Proposer may be required to provide a second tower.
- 3.20.2 The inspection platform of the tower shall be constructed at a minimum height of ten (10) feet from surrounding grade to finish floor level, have a minimum eight (8) feet by eight (8) feet of usable floor area, be covered by a roof with two (2) feet overhangs on all sides, and be provided with appropriate railings and a stairway. The platform shall be enclosed, starting from platform floor level and extending up four (4) feet on all four (4) sides. The expense incurred by the Proposer for the construction of towers is an overhead expense considered part of the Proposer's compensation under the terms and conditions of Section 5 Proposer Compensation.
- 3.20.3 Proposer shall provide a minimum of one (1) portable toilet at each dump site for the use of [Municipality] authorized representatives during their inspection of dumping operations. The toilet shall be provided prior to start of any dumping operations and will be kept in a sanitary condition by the Proposer throughout dumping operations. The expense incurred by the Proposer for the operation of portable toilets is an overhead expense considered part of the Proposer's compensation under the terms and conditions of Section 5 Proposer Compensation.
- 3.20.4 Care shall be taken to place tower at a sufficient distance away from any reduction/dumping operations. If necessary, dumping operations may be temporarily suspended by the [Municipality] due to unsuitable conditions at the tower.

3.21 Equipment

- 3.21.1 All trucks and other equipment must comply with all applicable local, state, and federal regulations. Any truck used to haul debris must be capable of rapidly unloading without the assistance of other equipment, and must be equipped with a tailgate that will effectively contain the debris during transport and permit the truck to be filled to capacity.

- 3.21.2 Sideboards or other extensions to the bed are allowable provided they meet all applicable regulations, cover the front and both sides, and are constructed to withstand severe operating conditions. The sideboards are to be constructed of two (2)-inch by six (6)-inch boards or greater and not to extend more than two (2) feet above the metal bedsides. Trucks or equipment certified with sideboards must maintain such sideboards and keep them in good repair. To ensure compliance, equipment will be inspected by the [Municipality] or authorized representative prior to its use by Proposer.
- 3.21.3 Trucks or equipment designated for use under this contract shall not be used for any other work during the working hours of this contract. Proposer shall not solicit work from private citizens or others to be performed in the designated area during the period of this contract. Under no circumstances will Proposer mix debris hauled for others with debris hauled under this contract.
- 3.21.4 Debris shall be reasonably compacted into the hauling vehicle. Any debris extending above the top of the bed shall be secured in place to prevent it from falling off. Measures must be taken to prevent debris from blowing out of the hauling vehicle during transport to an approved DMS or an approved final disposal site.
- 3.21.5 Equipment used under this contract shall be rubber tired and sized properly to fit loading conditions. Excessively large equipment (100 cubic yards and up) and non-rubber tired equipment must be approved for use on the road by the [Municipality].
- 3.21.6 Hand-loaded vehicles are prohibited unless pre-authorized in writing by the [Municipality] following the event. All hand-loaded vehicles will receive an automatic fifty (50) percent deduction for lack of compaction.
- 3.21.7 Proposer shall supply a list of all equipment owned by the proposer with their proposal submittal.

3.22 Traffic Control

- 3.22.1 Proposer shall mitigate the effects of their operations on local traffic to the fullest extent practical. The Proposer is responsible for establishing and maintaining appropriate traffic controls in all work areas, including DMS(s) and debris collection sites.
- 3.22.2 Proposer shall provide, erect, and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs, and other traffic control devices at all Proposer work areas to ensure the safety of vehicular and pedestrian traffic.
- 3.22.3 Proposer shall provide qualified flag personnel where necessary to direct the traffic and shall take all necessary precautions to protect the designated area and the safety of the public.
- 3.22.4 All work shall comply with all applicable local, state, and federal regulations governing personnel, equipment, and workplace safety. Any notification of a deficiency in traffic control or other safety items shall be immediately corrected by Proposer. No further work shall take place until the deficiency is corrected. Neither the [Municipality] nor the [Municipality's] authorized representative shall sign any additional load or unit rate tickets until the safety item is corrected.
- 3.22.5 Highways, streets, or parts of the designated area closed to through traffic shall be protected by effective barricades, and obstructions shall be illuminated during the hours from sunset

to sunrise. Suitable warning signs shall be provided by the Proposer to properly control and direct traffic.

- 3.22.6 All barricades, warning signs, lights, temporary signals, other protective devices, flag persons, and signaling devices shall meet the minimum requirements established in the Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI, prepared by the National Joint Committee on Uniform Traffic Control Devices and current at the time bids are received. Traffic control will conform to the State's most current roadway and traffic design standards and the Federal Highway Administration's Manual on Uniform Traffic Control Devices for Streets and Highways. The foregoing requirements are to be considered as minimum and the Proposer's compliance shall in no way relieve the Proposer of final responsibility for providing adequate traffic control devices for the protection of the public and Proposer's employees throughout the designated area.

3.23 Damage to Public or Private Property

- 3.23.1 All items damaged as a result of Proposer or Sub-Contractor operations (for example, sidewalks, seating, curbs, pipes, drains, water mains, pavement, mail boxes, and turf) shall be repaired or replaced by the Proposer, at their expense, in a manner prescribed by and at the sole satisfaction of the [Municipality]. Proposer will be responsible for any invoices submitted to the [Municipality] (such as by utility companies or landowners) that are determined to be the result of damage done by the Proposer. The [Municipality] reserves the right to pay any such invoices and deduct the cost from the Proposer's invoice. Repairs or receipt of repairs shall be completed and submitted to the [Municipality] prior to submission of the Proposer's invoice for work accomplished. If the Proposer fails to repair any damaged property, the [Municipality] may have the work performed and charge the Proposer.
- 3.23.2 The Proposer shall restore all disturbed areas to their original condition, including re-grading, use of rye grass and permanent grass, and any other means necessary.
- 3.23.3 Proposer's failure to restore damage to public or private property to the satisfaction of the [Municipality] will result in the [Municipality] withholding retainage money in an amount sufficient to make necessary repairs.

3.24 Existing Utilities

- 3.24.1 Some trees and debris that are to be removed under this Agreement may be blocked or entangled with overhead power, telephone, and television cables. In this case, it shall be Proposer's responsibility to coordinate directly with the utility owners to arrange for the removal of the debris without damage to the overhead and underground utility lines. The Proposer shall pay all such costs to the utility company for any adjustments.
- 3.24.2 The Proposer shall make the necessary repairs or pay all costs incurred to repair damaged utilities, as determined by the affected utility company. Repairs to all municipal and privately owned water and sewer facilities shall be made by the Proposer.

3.25 Environmental Protection

- 3.25.1 All chemicals of whatever nature used during project construction or furnished for project operations must be state and federally certified. Their use and disposal of all residues shall strictly comply with instructions.

- 3.25.2 Proposer shall, at their own expense, ensure that noise and dust pollution is minimized to comply with all local, state, and federal regulations and the approval of the [Municipality]. Proposer shall comply in a timely manner with all directions of the [Municipality] regarding the use of a water truck or other approved dust abatement measures.
- 3.25.3 Proposer shall comply with all laws, rules, regulations, and ordinances regarding environmental protection.

3.26 Documentation and Measurement

- 3.26.1 Prior to beginning any work, the [Municipality] or its authorized representative shall clearly number each truck or piece of equipment hauling or loading debris with a placard. All vehicles must be certified by the [Municipality] or its authorized representative prior to debris collection. If a vehicle is working under multiple contracts or for multiple communities, it must be re-certified by a [Municipality] authorized representative each time it returns to work from other contracts or communities.
- 3.26.2 Proposer is responsible for ensuring that all Sub-Contractors maintain valid driver's licenses and equipment legally fit for travel on the road.
- 3.26.3 Proposer shall designate one project manager. The project manager shall provide the [Municipality] with a telephone number at which the project manager can be reached throughout the project.
- 3.26.4 It is the [Municipality's] preference to use an electronic system for load tickets. An Automated Debris Management System (ADMS) or paper load tickets will be provided by the [Municipality] or its authorized representative for recording volumes of debris removal. If an ADMS is used a copy of the electronic ticket will be printed for the vehicle operator at the dump site. If paper tickets are to be used each load ticket shall consist of one (1) original and four (4) carbon-copy duplicates and will be distributed as follows:
- a. Load tickets will be issued by a [Municipality]-authorized representative at the loading site. [Municipality] will keep one (1) copy of the ticket, and give four (4) copies to the vehicle operator. Upon arrival at the dump site, the vehicle operator will give the four (4) copies to the [Municipality]-authorized representative at the dump site. Trucks with less than full capacities will be adjusted down by visual inspection; the [Municipality]-authorized representative present at the dump site will make this determination. The [Municipality]-authorized representative will validate, enter the estimated debris quantity, and sign the load tickets. [Municipality] will keep the original copy and the three (3) remaining duplicate copies will be returned to the vehicle operator for the Proposer's records.
- 3.26.5 Proposer shall give written notice of the location for work scheduled twenty-four (24) hours in advance to the [Municipality].

3.27 Ownership of Debris

All debris residing in the [Municipality] ROW and [Municipality]-provided DMS(s) as a result of the disaster shall be the property of the [Municipality] until final disposal at a properly permitted disposal site. Proposer shall be responsible removing debris up to the point where debris can only be described as light litter and additional collection can be

facilitated only by sweeping and raking. In addition to debris stored on the ROW as the result of road clearing, [Municipality] will direct residents to place debris in segregated piles along the ROW, separated according to the waste category. There may be a need to perform some curbside separation of the different waste materials. Different waste materials will be collected in separate vehicles and may require disposal at different locations, which will be approved by the [Municipality]. Any items requiring disposal at special sites shall be required to be monitored for the collection, complete haul, and delivery at the approved special site with the monitor obtaining an original copy of the disposal ticket showing inbound and outbound collection vehicle weights.

- 3.27.1 All bagged and bundled waste and debris smaller than two (2) inches in diameter and shorter than two (2) feet in length are outside the scope of this contract unless specifically directed by the [Municipality]. Collection of municipal solid waste (MSW) is outside the scope of this contract. All debris outside the scope of the contract handled by the Proposer shall become the property of the Proposer upon collection.
- 3.27.2 It is recognized that C&D debris might contain small amounts of asbestos, lead-based paints, treated wood, or similar materials. NYS DEC may issue orders for the classification and disposition of all disaster debris. Based on the mandates of NYS DEC and other applicable state and federal reimbursement agencies, the character and disposal of waste streams will be determined. The Proposer and [Municipality] will establish a final disposal plan based on these mandates.

3.28 [Municipality] Responsibilities

[Municipality] responsibilities will vary depending on [Municipality] needs and resources. The [Municipality], at a minimum, will be responsible for the following:

- a. Coordinating collection activities with the Proposer
- b. Completing the [Municipality] service request form
- c. Identifying suitable DMS activities
- d. Promoting debris management activities
- e. Providing educational materials
- f. Submitting post-collection DMS(s) data reports to NYS DEC
- g. Recruiting and coordinating volunteers
- h. Coordinating with local police, fire, emergency medical services, and other appropriate agencies
- i. Providing emergency contact information
- j. Executing the contract with selected Proposer(s)
- k. Issuing a written Notice to Proceed at the appropriate time

SECTION 4: EVALUATION AND SELECTION PROCESS

1. [Municipality] will evaluate proposals using the following criteria:
 - a. **Proposal Requirements and Completeness of Proposal** **5 points**
 - b. **References, Experience, Reputation, and Compliance** **30 points**
 - Experience and reputation in managing debris removal and disposal projects within state and federal regulations and guidelines
 - Personnel experience and training
 - Financial stability
 - c. **Debris Management Services** **25 points**
 - Degree of [Municipality] liability in proposed debris management methods
 - Breadth of service and number of contracts the Proposer can handle
 - Debris management methods and commitment to [Municipality] debris management preferences
 - Availability of preferred disposal methods (for example, types of materials planned for reuse and recycling)
 - Ability to ensure debris is collected, sorted, transported safely, and reduced appropriately
 - Ability to serve a wide range of project types (for example, permanent facility, one-day event, and mobile collection unit) and community types (for example, rural, urban, and suburban)
 - d. **Responsiveness of Proposal** **20 points**
 - Demonstrated understanding of [Municipality] and [Municipality] needs
 - Demonstrated understanding of requirements of the RFP and contract
 - Quality of proposal and impressions of response as it relates to project
 - Additional services, ideas, or products that will benefit [Municipality]
 - e. **Price** **20 points**
 - Reasonableness of Cost
2. An evaluation team will review all proposals received to determine the extent to which they comply with the requirements herein. The evaluation team may include representatives from local governments, [Municipality], or others with relevant expertise.
3. If a proposal fails to meet a material RFP requirement, the proposal may be rejected. A deviation is material to the extent that the proposal is not in substantial accord with the solicitation. Material deviations cannot be waived. Immaterial deviations may cause a bid to be rejected.
4. Proposals containing false or misleading statements may be rejected if the [Municipality] regards the information as intentionally misleading regarding a requirement of the RFP.
5. During the evaluation process, [Municipality] may require a Proposer representative to answer questions regarding the proposal. Proposer's failure to demonstrate that the claims made in the proposal are true may be sufficient cause for deeming a proposal non-responsive.

SECTION 5: CONTRACTOR COMPENSATION

Schedule 1

Hourly Labor, Equipment, and Material Price Schedule

(Scope of Service Item 1)

Equipment Type With Operator	Estimated Hours	Hourly Labor Rate	Total
Air Curtain Burner, Self-Contained System			
50' Bucket Truck			
Crash Truck w/Impact Attenuator			
Dozer, Tracked, D3 or Equivalent			
Dozer, Tracked, D4 or Equivalent			
Dozer, Tracked, D5 or Equivalent			
Dozer, Tracked, D8 or Equivalent			
Dump Truck, 16 +/- CY			
Dump Truck, 20 +/- CY			
Dump Truck, 38 +/- CY			
Generator, 5.5 kW, List kW Capacity			
Generator, 200 kW, List kW Capacity			
Generator, 2,500 kW, List kW Capacity			
Light Plant with Fuel and Support			
Grader w/12' Blade (Min. 30,000 LB)			
Hydraulic Excavator, 1.5 CY			
Hydraulic Excavator, 2.5 CY			
Knuckleboom Loader			
Lowboy Trailer w/Tractor			
Mobile Crane up to 15 Ton			
Pump, 95 HP (Minimum 25' Intake and 200' Discharge to Include Fuel and Support Personnel)			
Pump, 200 HP (Minimum 25' Intake and 200' Discharge to Include Fuel and Support Personnel)			
Pump, 650 HP (Minimum 25' Intake and 200' Discharge to Include Fuel and Support Personnel)			
Vac Truck (Mist Capacity), List Capacity			
Pickup Truck, 1 Ton			

Equipment Type With Operator	Estimated Hours	Hourly Labor Rate	Total
Skid-Steer Loader, 1,500 LB Operating Capacity (w/ utility grapple)			
Skid-Steer Loader, 2,500 LB Operating Capacity (w/ utility grapple)			
Compact Track Loader, 1,500 LB Operating Capacity (w/ utility grapple)			
Compact Track Loader, 2,500 LB Operating Capacity (w/ utility grapple)			
Tub Grinder, 800 to 1,000 HP			
Hydraulic Excavator, 1.5 CY (w/ thumb)			
Hydraulic Excavator, 2.5 CY (w/ thumb)			
Truck, Flatbed			
Articulated, Telescoping Scissor Lift for Tower, 15 HP/37 FT Lift			
Water Truck, 2500 Gal (Non-Potable, Dust Control and Pavement Maintenance)			
Wheel Loader, 3 CY, 152 HP			
Wheel Loader, 4.0 CY, 200 HP			
Wheel Loader-Backhoe, 1.5 CY, 95 HP			
Other – Please List			

Labor Category	Estimated Hours	Hourly Labor Rate	Hourly Labor Rate
Operations Manager w/Cell Phone and .5 Ton Pickup			
Crew Foreman w/Cell Phone and 1 Ton Equipment Truck w/Small Tools and Misc. Supplies in Support of Crew			
Tree Climber/Chainsaw and Gear			
Laborer w/Chain Saw			
Laborer w/Small Tools, Traffic Control, or Flag person			
Bonded and Certified Security Personnel			
Other – Please List			

Crew Category	Estimated Hours	Hourly Labor Rate	Total
Wheel Loader, 2.5 CY, 950 or Similar w/Operator, Foreman with Support Vehicle and Small Equipment, Laborer w/Chain Saw, and 2 Laborers w/Small Tools			
Other – Please List			

SAMPLE

SCHEDULE 2 - UNIT RATE PRICE SCHEDULE

Reference to RFP Scope of Services Items 2 to 16. If a Proposer elects to "No Bid" individual service offerings, their proposal may be considered non-responsive by the [Municipality].

1 ROW Vegetative Debris Removal Work consists of the collection and transportation of eligible vegetative debris on the ROW or public property to [Municipality]-approved DMS or [Municipality]-approved final disposal site.	Estimated Quantity	\$ Per Cubic Yard	Total	\$ Per Ton (Alternate)
0 to 15.99 miles	[###]			
16 to 30.99 miles	[###]			
31 to 60.99 miles	[###]			
Greater than 61 miles	[###]			
2 ROW C&D Debris Removal Work consists of the collection and transportation of eligible C&D on the ROW or public property to [Municipality]-approved DMS or [Municipality]-approved final disposal site as approved by [Municipality].	Estimated Quantity	\$ Per Cubic Yard	Total	\$ Per Ton (Alternate)
0 to 15.99 miles	[###]			
16 to 30.99 miles	[###]			
31 to 60.99 miles	[###]			
Greater than 61 miles	[###]			

3 Demolition, Removal, Transport and Disposal of Non-RACM Structures Work consists of the decommissioning, demolition, and disposal of eligible Non-RACM structures on public or private property and hauling the resulting debris to [Municipality]-approved final disposal site.	Estimated Quantity	\$ Per Cubic Yard	Total	\$ Per Ton (Alternate)
0 to 15.99 miles	[###]			
16 to 30.99 miles	[###]			
31 to 60.99 miles	[###]			
Greater than 61 miles	[###]			
4 Demolition, Removal, Transport and Disposal of RACM Structures Work consists of the decommissioning, demolition, and disposal of eligible RACM structures on public or private property and hauling the resulting debris to a [Municipality]-approved final disposal site.	Estimated Quantity	\$ Per Cubic Yard	Total	\$ Per Ton (Alternate)
0 to 15.99 miles	[###]			
16 to 30.99 miles	[###]			
31 to 60.99 miles	[###]			
Greater than 61 miles	[###]			

<p>5 DMS Management and Operations Work consists of managing and operating DMS for acceptance of eligible vegetative disaster-related debris. The costs associated with acquiring, preparing, leasing, renting, operating, and remediating land used as DMS is reflected in this bid.</p>	Estimated Quantity	\$ Per Cubic Yard	Total	\$ Per Ton (Alternate)
	###			
<p>6 DMS Management and Reduction by Grinding Work consists of managing and operating DMS for acceptance and reduction of eligible vegetative disaster-related debris through grinding. The costs associated with acquiring, preparing, leasing, renting, operating, and remediating land used as DMS is reflected in this bid.</p>	Estimated Quantity	\$ Per Cubic Yard	Total	\$ Per Ton (Alternate)
	###			
<p>7 DMS Management and Reduction by Air Curtain Incineration Work consists of managing and operating DMS for acceptance and reduction of eligible vegetative disaster-related debris through air curtain incinerators. The costs associated with acquiring, preparing, leasing, renting, operating, and remediating land used as DMS is reflected in this bid.</p>	Estimated Quantity	\$ Per Cubic Yard	Total	\$ Per Ton (Alternate)
	###			
<p>8 Haul-Out of Reduced Debris to [Municipality]-Approved Final Disposal Site Work consists of loading and transporting reduced eligible disaster-related debris at [Municipality]-approved DMS to [Municipality]-designated final disposal site.</p>	Estimated Quantity	\$ Per Cubic Yard	Total	\$ Per Ton (Alternate)
0 to 15.99 miles	###			
16 to 30.99 miles	###			
31 to 60.99 miles	###			
Greater than 61 miles	###			

9 Removal of Hazardous Trees and Limbs Work consists of removing eligible hazardous trees or limbs and placing them on the safest possible location on the [Municipality] ROW for collection under the terms and conditions of Scope of Services Item 2, Vegetative Debris Removal.	Estimated Quantity	\$ Per Tree	Total						
6-inch to 12.99-inch diameter	[###]								
13-inch to 24.99-inch diameter	[###]								
25-inch to 36.99-inch diameter	[###]								
37-inch to 48.99-inch diameter	[###]								
49-inch and larger diameter	[###]								
Hanger Removal (per Tree)	[###]								

SCHEDULE 2 - UNIT RATE PRICE SCHEDULE CONTINUED

10 Removal of Hazardous Stumps Work consists of removing eligible hazardous stumps and transporting resulting debris from the ROW to a [Municipality]-approved DMS. Rate includes removal, backfill of stump hole, reduction, and final disposal. Stumps under 24inches in diameter shall be paid at the Proposer's contracted rate for vegetative debris removal using the FEMA stump conversion table.	Estimated Quantity	\$ Per Stump	Total
24.0-inch to 36.99-inch diameter	[###]		
37-inch to 48.99-inch diameter	[###]		
49-inch and larger diameter	[###]		
11 ROW White Goods Debris Removal Work consists of the removal of eligible white goods from the ROW to [Municipality]-approved DMS site or [Municipality]-approved facility for recycling. Proposer shall be responsible for recovering/disposing refrigerants as required by law, as well as unit decontamination in a contained area. Proposer shall also be responsible for the transportation of eligible white goods from the [Municipality]-approved DMS to [Municipality]-approved facility for recycling.	Estimated Quantity	\$ Per Unit	Total
Refrigerators and freezers requiring refrigerant recovery and decontamination	[###]		
Washers, dryers, stoves, ovens, AC units, and hot water heaters	[###]		
12 Used Electronics Removal Work consists of the recovery and disposal of disaster-damaged televisions, computers, computer monitors, and microwaves unless otherwise specified in writing by the [Municipality].	Estimated Quantity	\$ Per Unit	Total
	[###]		

13 Household Hazardous Waste Removal, Transport, and Disposal Work consists of the collection, transportation, and disposal of HHW from the ROW to an [Municipality]-approved permitted hazardous waste facility or MSW Type I landfill.	Estimated Quantity	\$ Per Pound	Total	
	[###]			
14 Abandoned Vehicle Removal Work consists of the removal and transport of eligible abandoned vehicles.	Estimated Quantity	\$ Per Unit	Total	
Passenger Car	[###]			
Single Axle	[###]			
Double Axle	[###]			
15 Abandoned Vessel Removal Work consists of the removal and transport of eligible abandoned vessels.	Estimated Quantity	\$ Per Unit	Total	
Vessels less than 20 linear feet	[###]			
Vessels 21 linear feet and greater	[###]			
16 Dead Animal Carcasses Work consists of the recovery and disposal of dead animal carcasses.	Estimated Quantity	\$ Per Pound	Total	
	[###]			
Total	\$ _____			

Appendix F

CONTRACTOR, DISPOSAL, AND RECYCLING CONTACTS

CONTRACTS, DISPOSAL AND RECYCLING RESOURCES

As plan is updated, list of contracts developed will be listed as appropriate and feasible.

**Table 1
Debris Hauling Firms**

Company Name	Company Contact	Phone	Email	Address
TBD	TBD	TBD	TBD	TBD

*Firms in Table 1 were listed on the County's website, but not formally vetted as debris hauling firms.

**Table 2
Franchise Waste Haulers**

Company Name	Company Contact	Phone	Email	Address
Casella Waste Systems, Inc.	TBD	607-277-5361	TBD	PO Box 349 Newfield, NY 14867
Doug's Trash Removal	TBD	607-898-3220	TBD	105 W. South St. Groton, NY 13073
Hilliard Trash Service	TBD	315-497-3279	TBD	1341 Tollgate Rd Locke, NY 13092
Mansaz	TBD	607-216-8742	TBD	409 Manor Lane Newfield, NY 14867
Red Line Disposal	TBD	607-594-5000	TBD	109 State Route 228 Odessa, NY 14869
S&S Disposal	TBD	607-539-6535	TBD	398 Buffalo Rd Brooktondale, NY 14817
TPK Disposal Services	TBD	607-351-6573	TBD	1988 Danby Rd. Ithaca, NY 14850
City of Ithaca	TBD	607-272-1718	TBD	108 East Green St. Ithaca, NY 14850
Village of Cayuga Heights	TBD	607-257-1238	TBD	836 Hanshaw Rd. Ithaca, NY 14850
Natural Upcycling	TBD	585-584-3122	TBD	1818 Linwood Rd Linwood, NY 14486

**Table 3
Debris Monitors**

Company Name	Company Contact	Phone	Email	Address
TBD	TBD	TBD	TBD	TBD

CONTRACTS, DISPOSAL AND RECYCLING RESOURCES

Company Name	Company Contact	Phone	Email	Address

**Table 4
Potential Final Disposal Locations**

Permit	Site Name	Debris Type	Market	Operator	Location/Phone
TBD	Town of Enfield Town Barn	Vegetative	TBD	Town of Enfield	TBD
TBD	Tompkins County Recycling and Solid Waste Station	Electronics; Food Scraps; Household Hazardous Waste; Scrap Metal; Tires; Vegetative	TBD	Tompkins County; Casella	160 Commercial Avenue, Ithaca, NY 607-273-6632
TBD	Cayuga Compost	Vegetative, Food Waste	TBD	P&S Excavating	3225 Agard Rd, Trumansburg, NY 607-387-6826
TBD	Clean Harbors	Household Hazardous Waste	TBD	Clean Harbors	6741 VIP Parkway Syracuse, NY 315-741-3270
TBD	Casella Facility	White Goods	TBD	Casella	TBD

**Table 5
Recycling Resources**

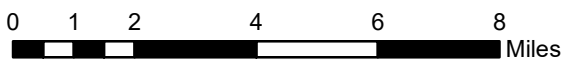
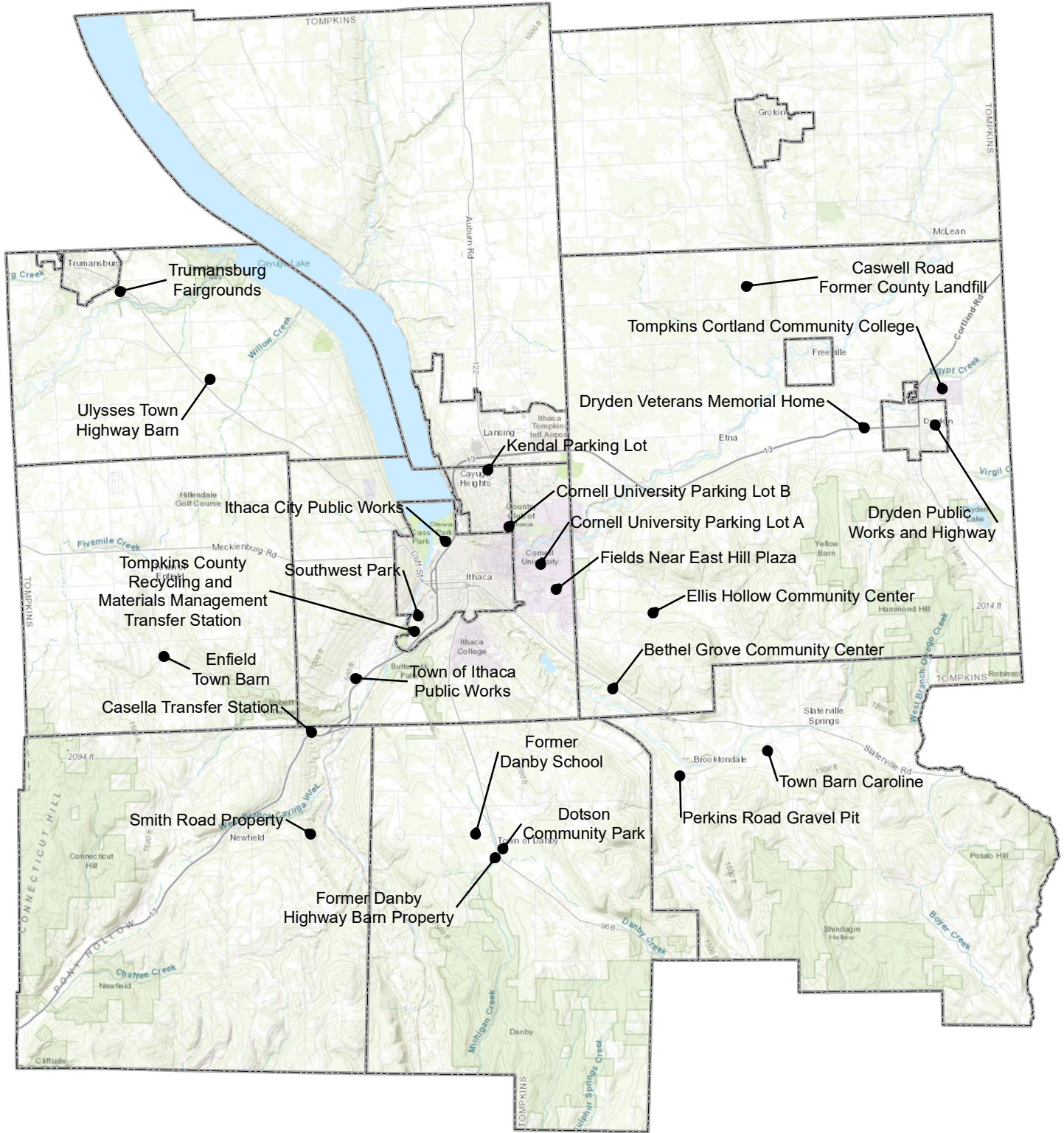
Site Name	Market	Location/Phone
Tompkins County Recycling and Solid Waste Station	TBD	160 Commercial Avenue, Ithaca, NY 607-273-6632

Appendix G

POTENTIAL DEBRIS MANAGEMENT SITE LOCATIONS

The County and municipalities have identified initial sites that could potentially be used for Debris Management Sites (DMS). These locations are listed and mapped on the following pages. Locations will be updated appropriately and as needed.

Potential Debris Management Site Locations



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Tompkins County Potential DMS Locations

Site	Location
Tompkins County Recycling Materials Management Transfer Station	160 Commercial Ave., Ithaca (42.424577, -76.517950)
Caswell Road Former County Landfill	Caswell Road (42.53436, -76.37156)
Perkins Road Gravel Pit	Perkins Road, Brooktondale, NY (42.377942, -76.402308)
County Public Works	114 Seven Mile Drive, Ithaca (42.4099325, -76.544424269)
Tompkins Cortland Community College	170 North Street, Dryden (42.503321, -76.287024)
Cornell University Parking Lot A	Pleasant Grove Road, Ithaca (42.458363, -76.476561)
Cornell University Parking Lot B	Dryden Road, Ithaca (42.446376, -76.463242)
Fields Near East Hill Plaza	Ellis Hollow Road, Ithaca (42.438669, -76.451503)

Tompkins County Recycling Materials Management Transfer Station



Recycling and Solid Waste Center

- County Owned Parcels
- Tax Parcels 2020
- UNA 2018
- NYSDEC Freshwater Wetlands
- Water Resources Council Wetlands
- 1% (100-Year) Annual Chance Floodway
- 0.2% (500-Year) Annual Chance Floodway
- Open Space
- Natural Features Focus Areas
- Intermittent Streams
- Perennial Streams

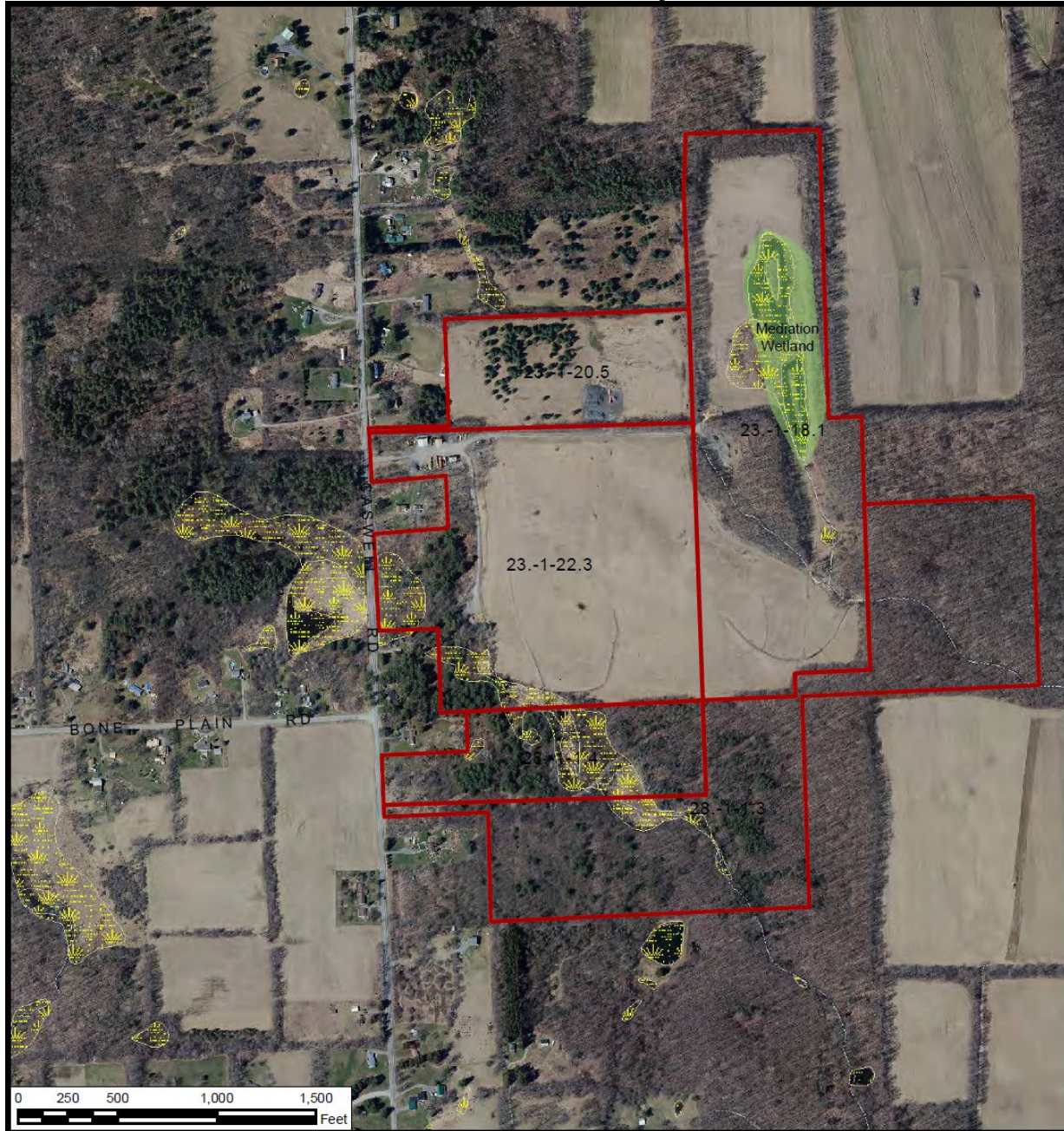


Tompkins County Department of Planning and Sustainability
September 2020



Ithaca

Caswell Road Former County Landfill



Caswell Landfill
502489-23.-1-22.3

County Owned Parcels

Water Resources Council Wetlands

Open Space

Intermittent Streams

Perennial Streams

2018 Ortho Image

502489-23.-1-18.1

502489-23.-1-20.5

502489-23.-1-22.3

502489-28.-1-1.3

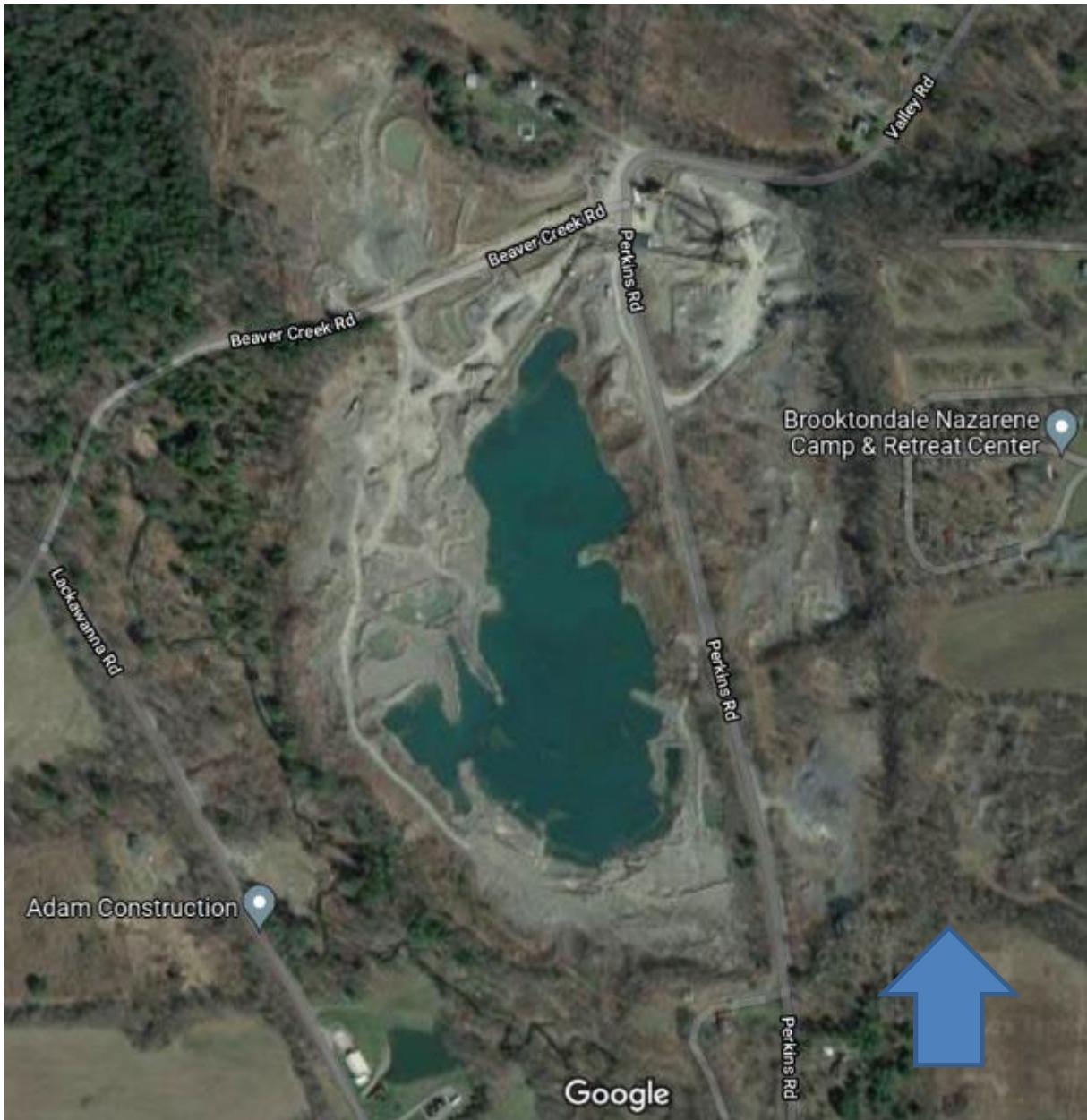
502489-28.-1-1.4



Tompkins County Department of Planning and Sustainability
September 2020


 Dryden

Perkins Road Gravel Pit



Note: This and every subsequent map is a Google image (2021) taken to show the representative area identified by the municipal partner as a potential debris management site. Generally all are oriented with North being the top of the page.

County Public Works



Tompkins Cortland Community College



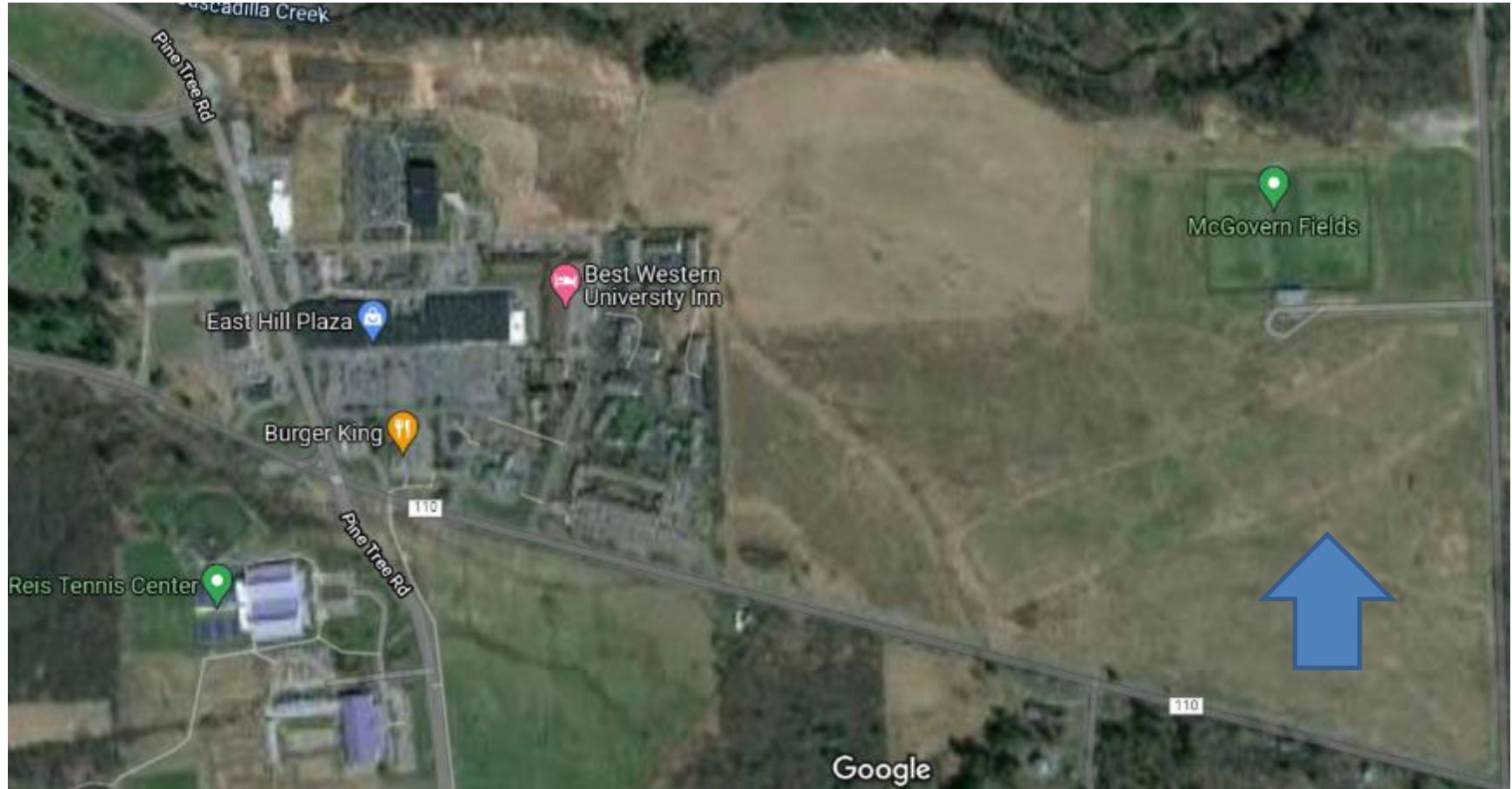
Cornell University Parking Lot A



Cornell University Parking Lot B



Fields Near East Hill Plaza



Town of Caroline Potential DMS Locations

Site	Location
Town Barn	Valley Road, Brooktondale, NY

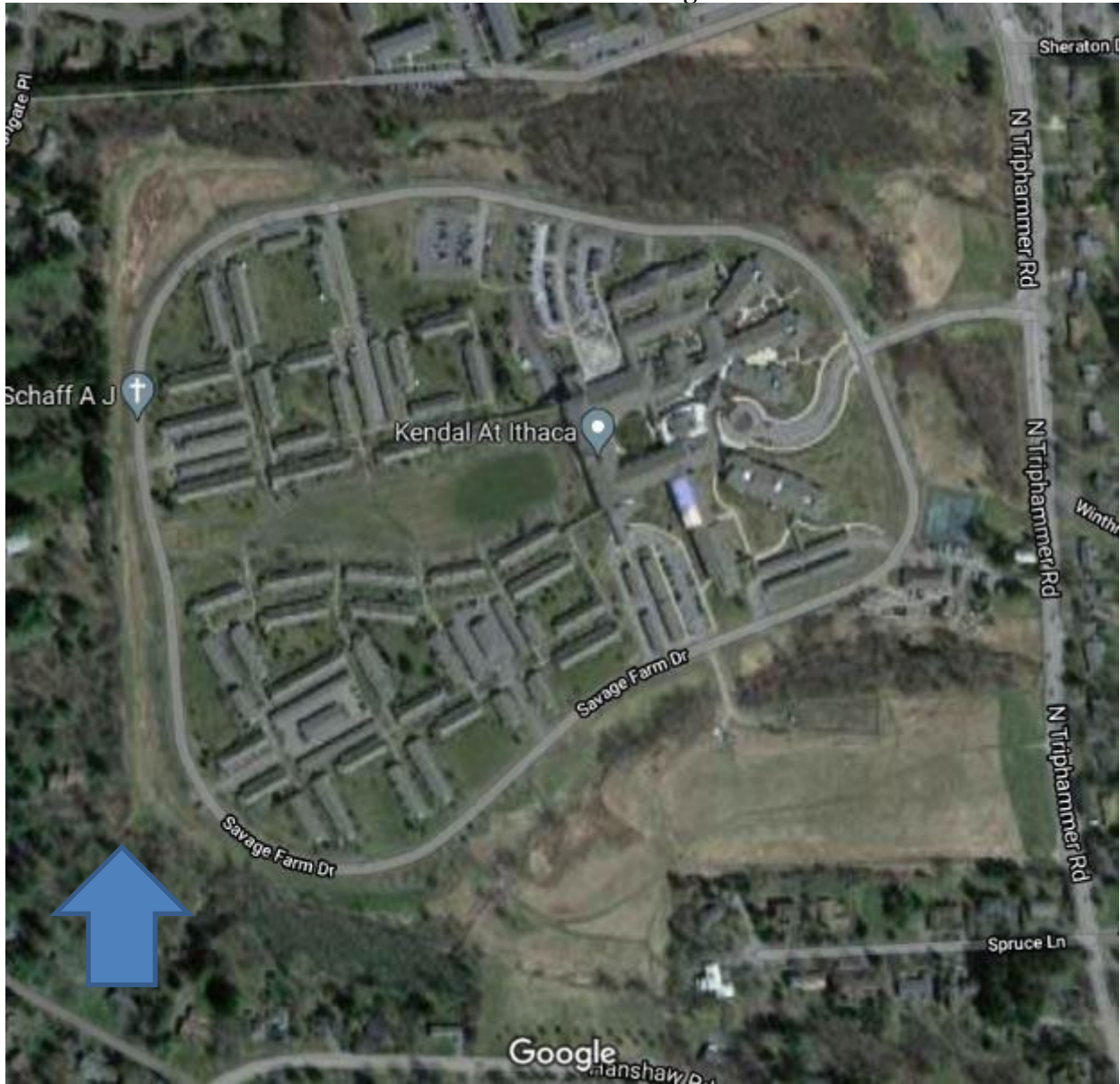
Town Barn



Village of Cayuga Heights Potential DMS Locations

Site	Location
Kendall Grounds/Parking Lot	2230 N Triphammer Rd (42.4750572, -76.490172316)

Kendall Grounds/Parking Lot



Town of Danby Potential DMS Locations

Site	Location
Old Danby School	54 Gunderman Road (42.3589895, -76.493288417)
Old Danby Highway Barn Property	15 Bald Hill Road (42.351531, -76.4850885538)
Dotson Community Park	Ithaca Road (42.351974, -76.481161717)

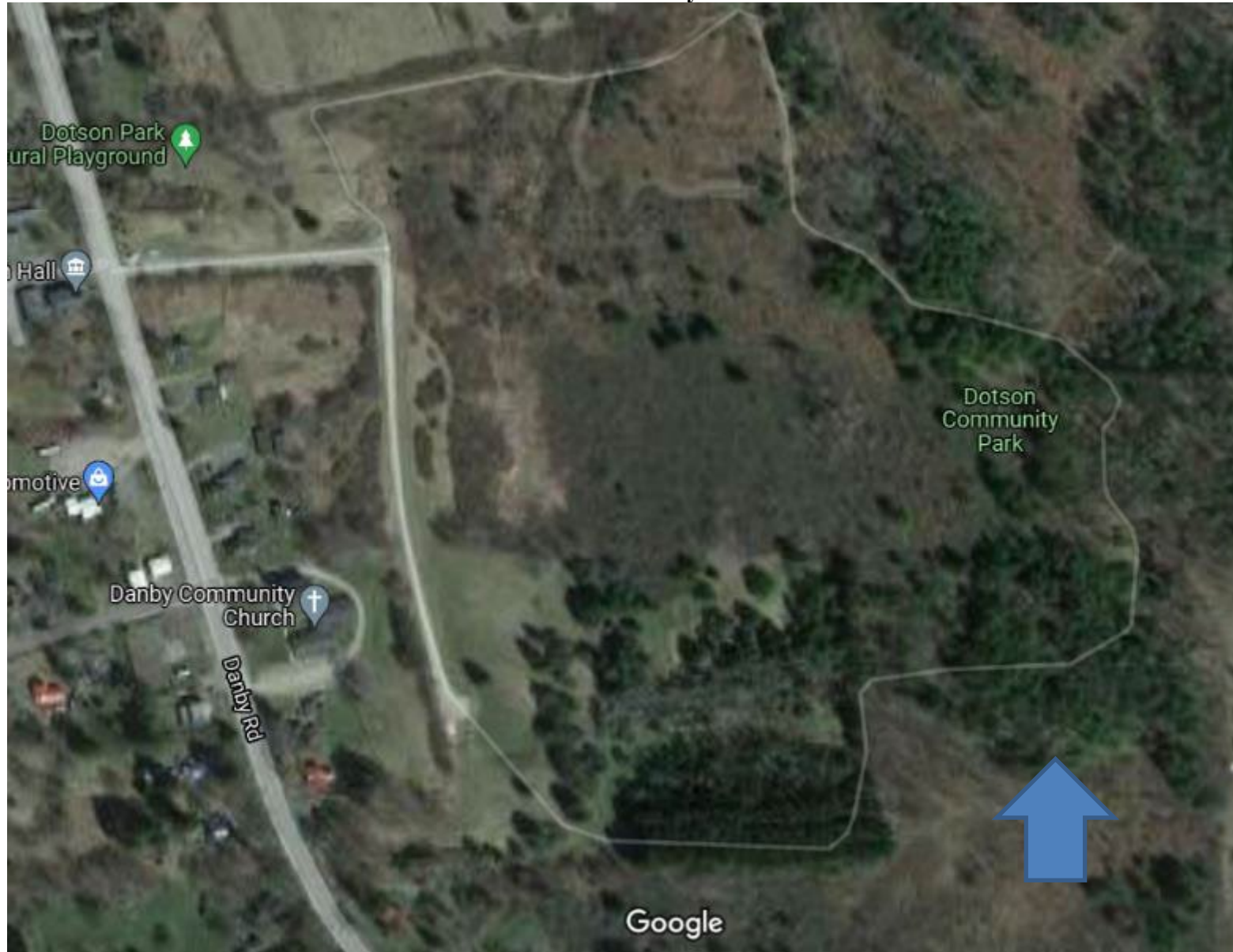
Old Danby School



Old Danby Highway Barn Property



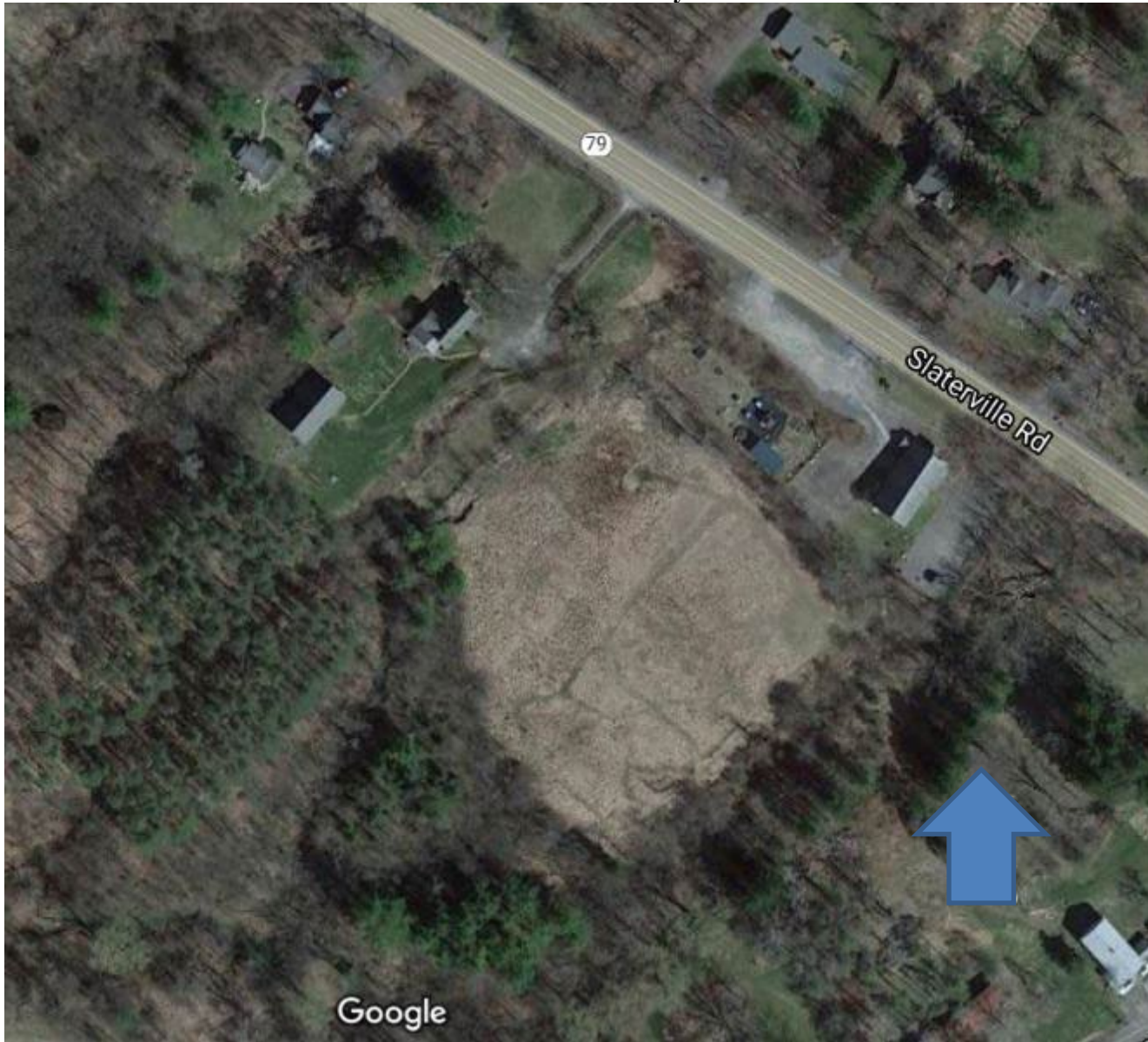
Dotson Community Park



Town of Dryden Potential DMS Locations

Site	Location
Bethel Grove Community Center	1825 Slaterville Rd (42.4057755, -76.4327809226)
Dryden Veterans Memorial Home	2272 Dryden Rd (42.4902089, -76.3223942268)
Ellis Hollow Community Center	111 Genung Rd (42.4302071, -76.414109380)

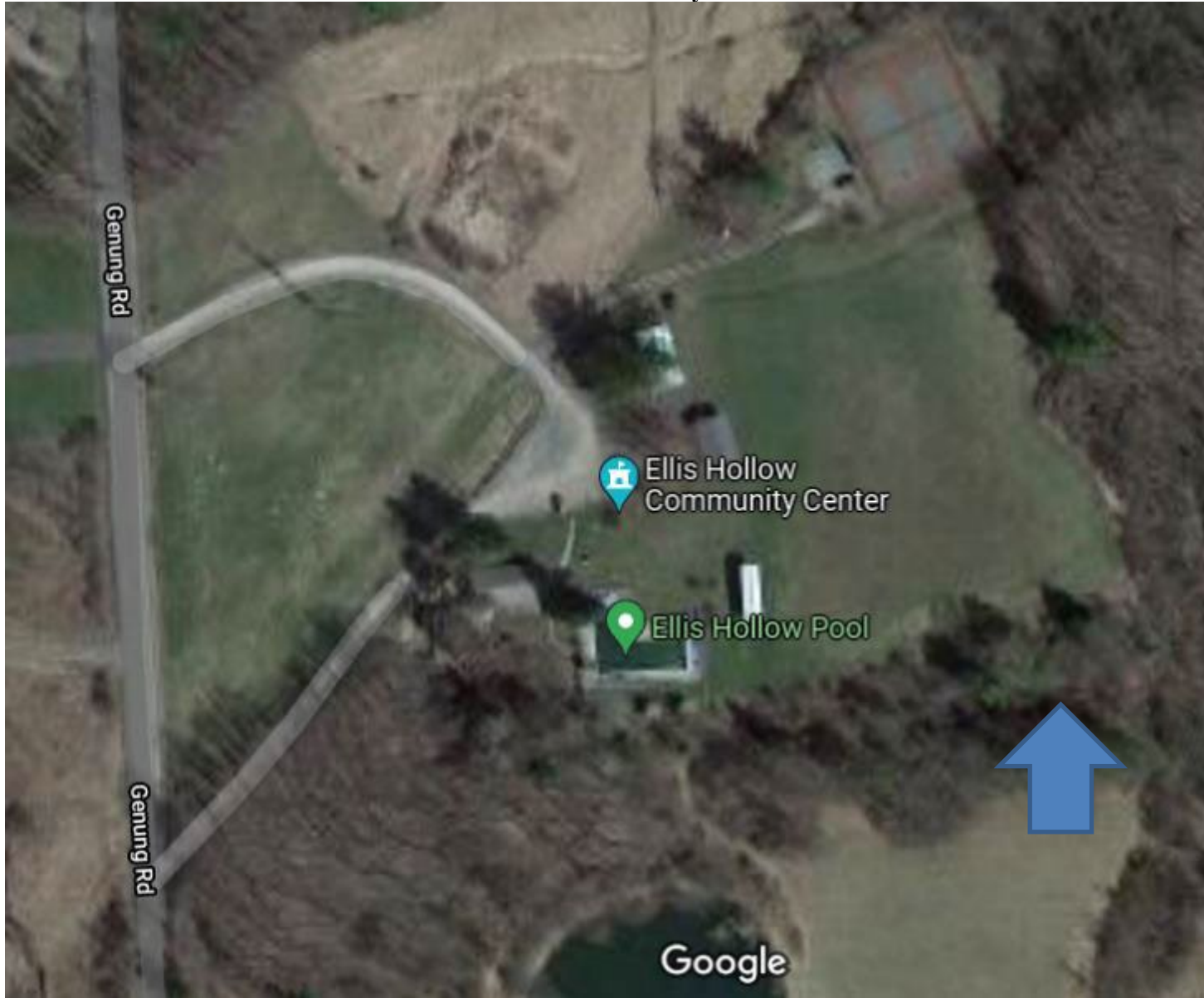
Bethel Grove Community Center



Dryden Veterans Memorial Home



Ellis Hollow Community Center



Village of Dryden Potential DMS Locations

Site	Location
Dryden Public Works and Highway	61 E Main St (42.4918618, -76.292412)

Dryden Public Works and Highway



Town of Enfield Potential DMS Locations

Site	Location
Town Barn	Enfield Main Road, Ithaca (42.417198, -76.626489)

Town Barn



Village of Freeville Potential DMS Locations

Site	Location
TBD	TBD

Site
[Insert Map]

Town of Groton Potential DMS Locations

Site	Location
TBD	TBD

Site
[Insert Map]

City of Ithaca Potential DMS Locations

Site	Location
Public Works Facility	245 Pier Road (42.45350490593525, -76.5033158697948)
Southwest Park	Southwest Park Road (42.4255, -76.5148)

Public Works Facility



Southwest Park



Town of Ithaca Potential DMS Locations

Site	Location
Town of Ithaca Public Works	114 Seven Mile Drive (42.4099325, -76.544424269)

Town of Ithaca Public Works



Town of Lansing Potential DMS Locations

Site	Location
TBD	TBD

Site
[Insert Map]

Village of Lansing Potential DMS Locations

Site	Location
TBD	TBD

Site
[Insert Map]

Town of Newfield Potential DMS Locations

Site	Location
Smith Road Property	Town Property (42.35917, 76.56305)
Casella Transfer Station	1180 Elmira Road (42.392104, -76.562686)

Smith Road Property



Casella Transfer Station



Village of Trumansburg Potential DMS Locations

Site	Location
Fairgrounds	2150 Trumansburg Road (42.5353773, -76.6479423225)

Fairgrounds



Town of Ulysses Potential DMS Locations

Site	Location
Town Highway Barn	3888 Colegrove Road (42.506078, -76.607051)

Town Highway Barn



Appendix H
SAMPLE DMS MEMORANDUM OF AGREEMENT

SAMPLE DMS MEMORANDUM OF AGREEMENT

This Memorandum of Agreement made and entered into this _____ day of _____ 20__, by and between (hereinafter "OWNER"), and the [Municipality], New York (hereinafter "[MUNICIPALITY]") (collectively referred to hereinafter as "the Parties").

WHEREAS, the [MUNICIPALITY] has a debris management plan for the removal, reduction, and disposal of large volumes of debris from public property following large scale disasters; and

WHEREAS, pursuant to the [MUNICIPALITY] debris management plan, the [MUNICIPALITY] may or may not enter into an agreement with one or more contractor(s) to manage and operate the removal, reduction, and disposal of disaster generated debris depending on the severity of the incident; and

WHEREAS, OWNER is the owner of a tract of land in **JURISDICTION OF TRACT OF LAND** (hereinafter "the Property"), more particularly described in **Exhibit A** attached hereto; and

WHEREAS, the [MUNICIPALITY] has identified the Property owned by OWNER as a suitable location for a Debris Management Site ("DMS"), to be used by the [MUNICIPALITY] in the event of a disaster necessitating debris removal, reduction, and disposal; and

WHEREAS, the [MUNICIPALITY] and the OWNER have agreed to cooperate toward establishment of a DMS to be used by the [MUNICIPALITY], or its designees, in the event of emergency assistance efforts requiring debris removal, reduction, and disposal in the [Municipality].

Now therefore, the Parties agree as follows:

I. PROPERTY

The Property, as shown and identified as DMS on **Exhibit A**, constitutes approximately _____ acres available for DMS operations. The physical location of the site is: _____ and is a portion of property owned by OWNER identified as: _____ Real Estate ID#: _____.

II. TERM

Subject to early termination as permitted by Section V herein below, this Agreement shall be for a term of _____ from the date of the Agreement without regard to the Commencement Date (as hereinafter defined).

III. AGREEMENT

OWNER, subject to the terms and conditions set forth herein, hereby agrees to the use of the Property by the [MUNICIPALITY] for purposes of staging, storing, reducing, and properly disposing of disaster generated debris following a natural or man-made event.

IV. [MUNICIPALITY] OBLIGATIONS

- a. Obtain, or cause to be obtained, all required local, state, and federal permits for the operation of a DMS.
- b. Install, or cause to be installed, if necessary, a temporary access road (of gravel, graded dirt, or other temporary material) for access of debris hauling vehicles to the Property.

SAMPLE DMS MEMORANDUM OF AGREEMENT

- c. Manage, or cause to be managed, the DMS during the entire period of [MUNICIPALITY] use.
- d. Remove, or cause to be removed, all debris, vehicles, equipment, and temporary structures located on the property which were placed thereon by the [MUNICIPALITY], its employees, agents, contractors, subcontractors, and representatives.
- e. Restore, or cause to be restored, the property to the property's pre-use condition prior to the return of use of property to the OWNER.
- f. Perform, or cause to be performed, soil testing and abatement of any hazards created on the property as a direct result of [MUNICIPALITY] use as required under local, state, and federal law prior to the closing of the debris site and return of use of the property to the OWNER.
- g. Repair, or cause to be repaired, any damage to the property, including buildings and structures located on the property, caused as a direct result of [MUNICIPALITY] use of the property; in lieu of making or causing to make repair, the [MUNICIPALITY] may compensate OWNER for the cost of said repair upon agreement of both parties.

V. OWNER OBLIGATIONS

- a. Take no action that renders the Property unusable as a temporary disaster debris disposal site as determined by the [MUNICIPALITY].
- b. Upon notification (either verbal or in writing) by the [MUNICIPALITY] of the [MUNICIPALITY'S] intent to make use of some or all of the Property as a DMS under the terms and conditions of this Agreement, to make as much of the Property as deemed necessary by the [MUNICIPALITY] immediately available to the [MUNICIPALITY], and to immediately remove all personal property (including, but not limited to vehicles and equipment) from those portions of the Property identified by the [MUNICIPALITY] for use.
- c. Not interfere in any manner with [MUNICIPALITY]-controlled debris management operations during the period of the [MUNICIPALITY's] use of the Property under the terms and conditions of this Agreement.

VI. COMMENCEMENT DATE

The [MUNICIPALITY] will initiate DMS operations immediately preceding an event anticipated to generate debris within the [MUNICIPALITY], or immediately following an event that generated debris within the [MUNICIPALITY]. The [MUNICIPALITY] will activate this Agreement through verbal notification to the OWNER, followed by written notification transmitted by United States mail as certified or registered mail, return receipt requested, postage paid, and addressed to OWNER.

The "Commencement Date" shall be the date upon which notification is verbally provided by the [MUNICIPALITY] to OWNER.

SAMPLE DMS MEMORANDUM OF AGREEMENT

VII. ASSIGNMENT

OWNER shall not sell or in any way assign, transfer, or encumber his control of the Property without prior written notification to the [MUNICIPALITY].

VIII. COMPENSATION

The parties agree that no compensation will be rendered for the use of the Property by the [MUNICIPALITY]. The [MUNICIPALITY], or its designee(s), shall be responsible for restoring the Property to its original state.

IX. DMS OPERATIONS

The [MUNICIPALITY], or its designee(s), will establish, operate, and monitor DMS operations from the time of activation of this agreement through site restoration.

X. WORKING HOURS

Working hours for the DMS are only during daylight hours, seven days a week. Working hours may need to be adjusted to accommodate 24-hour operations depending on the severity of the incident.

XI. DEBRIS DISPOSAL

The [MUNICIPALITY], or its designee(s), will properly, promptly, and lawfully dispose of all waste, ash, and debris brought to or generated on the DMS.

XII. DEBRIS SOURCES

The debris stream entering the DMS may include debris generated in the unincorporated areas of _____ the [MUNICIPALITY], areas within neighboring municipalities, and from road rights-of-way maintained by the New York State Department of Transportation (NYS DOT). The [MUNICIPALITY] will coordinate with the NYS DOT, and neighboring municipalities with regard to debris disposal at the [MUNICIPALITY]-operated DMS.

The intention of this Agreement is to create an arrangement where NYS DOT, and municipalities can deliver their debris to the DMS upon approval by the [MUNICIPALITY] and does not necessitate individual agreements between the OWNER and each entity.

XIII. NOTICES

Any notice or demand which by any provision of this agreement is required or allowed to be given by either party to the other shall be deemed to have been sufficiently given for all purposes when made in writing and sent in the United States mail as certified or registered mail, return receipt requested, postage paid, and addressed to the following respective addresses: _____

XIV. INDEMNIFICATION

The [MUNICIPALITY] agrees to indemnify and hold harmless OWNER from any claims, causes of action, administrative proceedings, and any and all other legal claims directly arising out of or relating to any damage, injury, loss, or other actions or omissions taken by [MUNICIPALITY], its employees, agents, contractors,

SAMPLE DMS MEMORANDUM OF AGREEMENT

subcontractors, and representatives as a direct result of the [MUNICIPALITY's] use of the Property under the terms and conditions of the Agreement. The [MUNICIPALITY] shall not be liable for any damage, injury, loss, or other actions or omissions not taken by [MUNICIPALITY], its employees, agents, contractors, subcontractors and representatives, including acts of third parties not operating at the direction of or under the control of [MUNICIPALITY]. Further, [MUNICIPALITY] shall not be liable for any injury, damage, or loss sustained by OWNER as a result of OWNER'S breach of the terms and conditions of this Agreement.

XV. TERMINATION

This Agreement shall be in effect from the last date written below until _____. This Agreement may be terminated by either party upon submission of a thirty-day advance written notice of termination. It is the intention of the Parties to discuss the renewal of this Agreement on an annual basis. Such renewals, if mutually agreed upon, shall be evidenced by an executed Supplemental Memorandum of Agreement. The Parties may choose to negotiate new or changed terms at the time of renewal.

OWNER:

[MUNICIPALITY]:

XVI. ENTIRE AGREEMENT

The OWNER and the [MUNICIPALITY] agree that this document constitutes the entire agreement between the two parties and may only be modified by a written mutual agreement signed by the parties. Modifications may be evidenced by electronic signatures. Unless and until further modified, this agreement shall consist of this document and the following attachments or addenda: **Exhibit A**

XVII. GOVERNING LAW

Both parties agree that this Agreement shall be governed by the laws of the State of New York.

SAMPLE DMS MEMORANDUM OF AGREEMENT

This Agreement shall be effective on the date of the last signature below. [MUNICIPALITY] in witness whereof, the Parties have each executed this Agreement, this the ___ day of _____, 20__.

OWNER

BY: _____
(Signature)

(Print Name)

(Title)

DATE: _____

[MUNICIPALITY]

BY: _____
(Signature)

(Print Name)

(Title)

DATE: _____

WITNESS

BY: _____
(Signature)

(Print Name)

(Title)

DATE: _____

Appendix I
SAMPLE PUBLIC INFORMATION MESSAGES

For Immediate Release (Approximately 48-72 Hours Prior to Incident)

Tompkins County, New York – The potential for dangerous conditions is eminent for Tompkins County and its residents. The County is prepared and has a plan in place to immediately respond following the incident. After dangerous conditions subside and roads have been cleared of obstructions, residents should bring any debris to the public right-of-way for removal.

The public right-of-way is the area of residential property that extends from the street to the sidewalk, ditch, utility pole, or easement. Residents should separate clean, vegetative debris (woody debris such as limbs and shrubbery) from construction and demolition debris. Do not mix hazardous materials, such as paint cans, aerosol sprays, batteries, or appliances, with construction and demolition debris. Household garbage, tires or roof shingles cannot be combined with any **INSERT INCIDENT** related debris.

Do not place debris near water meter vaults, fire hydrants, or any other above-ground utility. Only debris placed on the public right-of-way will be eligible for collection until further notice.

If all debris is not picked up during the initial pass, residents should continue to push remaining debris to the public right-of-way for collection on subsequent passes. Residential debris drop-off locations may be available within the County. Check the County's web site at **INSERT WEB SITE, INSERT SOCIAL MEDIA SITE(S)** for the location of these sites and the hours of operation or call **INSERT NUMBER**. The County website will provide County office closure times/dates. All reconstruction debris (debris resulting from rebuilding) is the responsibility of the homeowner. Those items must be dropped off at the **INSERT LOCATION**.

Tompkins County residents are encouraged to stay indoors until the danger has passed. Please tune into local news channels for updated weather information.

#####

For Immediate Release (Approximately 0-72 Hours Following Incident)

Tompkins County, New York – The County is beginning its recovery process in the wake of **INSERT INCIDENT**. County residents are asked to place any **INSERT INCIDENT** related debris on the public right-of-way.

The public right-of-way is the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement. Keep vegetative debris (woody debris such as limbs and shrubbery) separated from construction and demolition debris, as they will be collected separately. Bagged debris should not be placed on the public right-of-way, only loose debris will be collected. Any household hazardous waste, roof shingles, or tires resulting from **INSERT INCIDENT** may be eligible for removal and should be separated at the curb.

Do not place near water meter vault, fire hydrant, or any other above-ground utility. Only debris placed on the public right-of-way will be eligible for collection until further notice.

If all debris is not picked up during the initial pass, please continue to push remaining debris to the right-of-way for collection on subsequent passes. Household garbage collection will resume to its normal schedule on **INSERT DATE AND TIME**. Please check the County's web site **INSERT WEB SITE, INSERT SOCIAL MEDIA SITE(S)** for additional information and updates on the debris removal process.

For more information, please call the County's debris hotline at **INSERT NUMBER**.

####

For Immediate Release (72 Hours Prior to Final Pass of Debris Removal)

Tompkins County, New York. – Final preparations are being made for the **third** and potentially final pass for debris removal in the wake of **INSERT INCIDENT.**

County residents should have all **INSERT INCIDENT** related debris in front of their homes on the public right-of-way (the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement) no later than **INSERT DATE** to be eligible for pick-up.

The County will not be able to guarantee that debris placed on the public right-of-way after the specified deadline will be removed.

Residents should continue to separate vegetative debris (woody debris such as limbs and shrubbery) and construction and demolition debris. Do not place debris near water meter vault, fire hydrant or any other above-ground utility. Hazardous household chemicals such as paint cans and batteries may be deposited at the **INSERT LOCATION.**

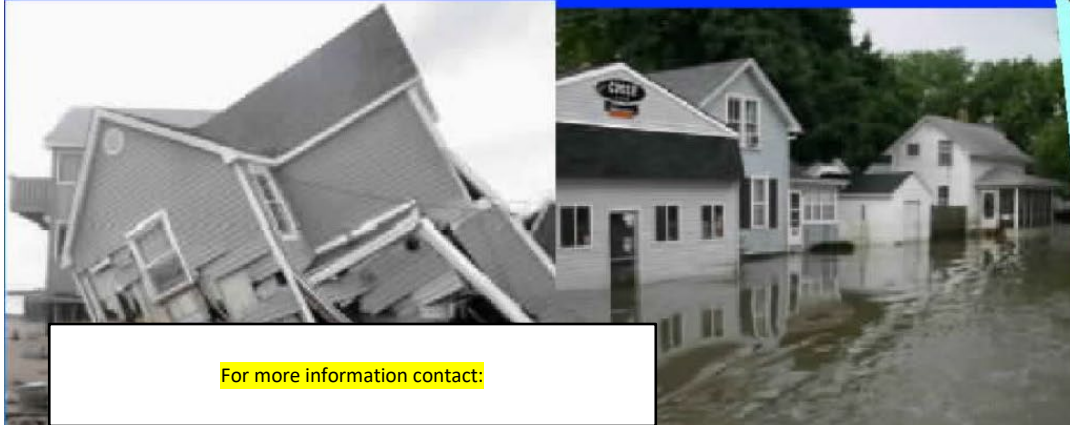
You can follow the debris removal efforts in your neighborhood and the rest of the County by going to the County’s Web site at **INSERT WEB SITE, INSERT SOCIAL MEDIA SITE(S),** or by calling **INSERT NUMBER.**

####



SPEED UP YOUR CLEANUP

Guide for New York Residents to expedite storm debris cleanup and recovery.



For more information contact:

Storm Debris Cleanup Instructions

1. Put piles in the right of way (the area between the sidewalk and street).
2. Separate piles as shown below.
3. Don't pile materials near fire hydrants, mailboxes, utility poles, meters or storm drains.
4. Keep piles off the sidewalks and out of the streets.
5. Separate normal household trash for regular collections.
6. Share piles with neighbors.
7. For more information, contact your town or go to: www.dec.ny.gov



<p>Recyclables</p> <p>Recycle all the materials that are in your program.</p>	<p>Trash, Food Waste and Contaminated Paper</p> <ul style="list-style-type: none"> • Spoiled Food • Wet/Moldy Paper and Cardboard 	<p>Vegetative Waste</p> <ul style="list-style-type: none"> • Trees • Branches • Stumps 	<p>Demotion Debris and Bulky Items</p> <ul style="list-style-type: none"> • Carpet • Lumber • Building Materials • Furniture • Drywall • Barbecue Grills (without the tank) • Lawn Care Tools • Motors (drained of gas & oil) 	<p>Appliances (White Goods)</p> <ul style="list-style-type: none"> • Refrigerators and Freezers (with all food removed and doors removed or secured) • Washers/Dryers • Air Conditioners • Stoves 	<p>Electronics (e-Waste)</p> <ul style="list-style-type: none"> • TVs • Computers • Monitors 	<p>Household Hazardous Waste</p> <ul style="list-style-type: none"> • Oil Based Paints • Lawn Chemicals • Pesticides • Batteries • Propane Tanks • Unbroken Fluorescent Lights

New York State Department of Environmental Conservation

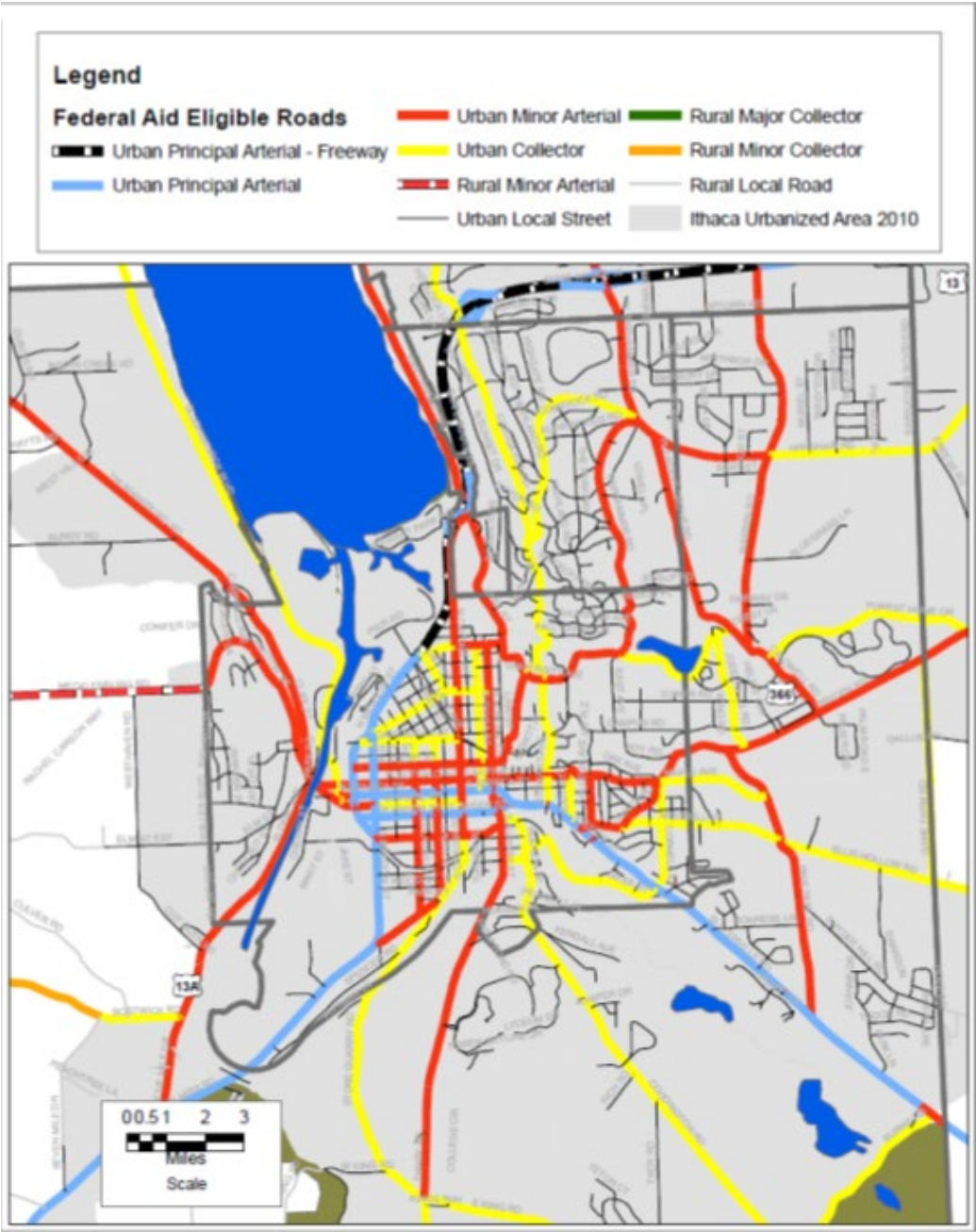
Thanks to NJDEP for use of this poster.

Appendix J PRIORITY ROADS LIST

The County and municipalities have prioritized roadways based on functional class for debris clearance purposes. A map showing the functional class of roadways in the County is provided on the next page. The sections that follow list the roads that have been prioritized for clearance due to the presence of critical facilities.

Tompkins County Road Network by Functional Class





Tompkins County Roads

Road/Road Section	Reason for Priority
Brooktondale Road, Town of Caroline	U.S. Post Office
Mill Road, Town of Caroline	Speedsville Fire Station
Valley Road, Town of Caroline	Brooktondale Fire Station; Town Highway Department Garage; Old Brooktondale Fire Department
Coddington Rd, Town of Ithaca	Utility Facility
Sheldon Road, Village of Cayuga Heights	Cayuga Heights Village Barn; Water Tank
Bald Hill Road, Town of Danby	Town Highway Garage
Comfort Road, Town of Danby	Utility Facility
Hornbrook Road, Town of Danby	Highway Department
Nelson Road, Town of Danby	Ithaca Waldorf School
Troy Road, Town of Danby	Communications Facility
Ellis Hollow Creek Road, Town of Dryden	Utility Facilities
Hanshaw Road, Town of Dryden	Tompkins County Soil & Water; National Guard; Cornell University
Turkey Hill Road, Town of Dryden	Varna Fire Station
Church Street, Town of Groton	Utility Facility
School Street, Town of Groton	Cassavant Elementary School; U.S. Post Office
Spring Street Extension, Town of Groton	Highway Garage
Stevens Road, Town of Groton	McLean Fire Department
Taughannock Boulevard, City of Ithaca	Military Facility
Bostwick Road, Town of Ithaca	School District Facility

Road/Road Section	Reason for Priority
Pine Tree Road, Town of Ithaca	Wastewater Pump
Brown Road, Village of Lansing	U.S. Geological Survey Office; County Health Department; Airport; County Fire and Rescue; County Department of Emergency Response
North Triphammer Road, Village of Lansing	Village of Lansing Offices, Highway Garage
Newfield Depot Road, Town of Newfield	Railroad Depot
Iradell Road, Town of Ulysses	Water Tank

Town of Caroline Roads

Road/Road Section	Reason for Priority
2600 – 2800 Blocks of Slaterville Road	Slaterville Fire Station; Sweet Pea Cottage Preschool; Caroline Elementary School; Caroline Town Hall; Communications Facility; U.S. Post Office
Mill Road	Speedsville Fire Station
Valley Road	Brooktondale Fire Station; Town Highway Department Garage; Old Brooktondale Fire Department
Brooktondale Road	U.S. Post Office
Taft Road	Communications Facility
Speedsville Commons	Speedsville School

Village of Cayuga Heights Roads

Road/Road Section	Reason for Priority
Jessup Road	Tobin Field House
East Upland Road	Cayuga Heights Elementary School
Country Club Road	Hurlburt House
100 block of Pleasant Grove Road	Cayuga Heights Fire Department; Communications Facility
Sheldon Road	Cayuga Heights Village Barn; Water Tank
Hanshaw Road	Cayuga Heights Village Office and Police Department; USDA Service Center
Triphammer Road	Kendal at Ithaca

Town of Danby Roads

Road/Road Section	Reason for Priority
Bald Hill Road	Town Highway Garage
Comfort Road	Utility Facility
Curtis Road	Communications Facility
Danby Road	Town Hall
East Miller Road	Communications Facility
Hornbrook Road	Highway Department
Nelson Road	Ithaca Waldorf School
Sylvan Lane	West Danby Fire Station
Troy Road	Communications Facility

Town of Dryden Roads

Road/Road Section	Reason for Priority
Abbott Road	Office of Mental Health
Dryden Road	NYSEG; Covenant Love Community School; NYSP
Ellis Hollow Creek Road	Utility Facilities
Farview Drive	Communications Facility; Water Tank
Freeville Road	Dryden District Office, High School, Middle School; Communications Facility
Genung Road	Utility Facility
Hanshaw Road	Tompkins County Soil & Water; National Guard; Cornell University
Hart Road	Water Tower
Lower Creek Road	Town Hall; Etna Volunteer Fire Department facility
McDonald Road	George Jr. Martineau School Buildings
Mt. Pleasant Road	Communications Facility
Mt. Pleasant Road	Utility Facility
North Street	Tompkins County Community College
Pinckney Road	Utility Substation
Simms Hill Road	Communications Facility
Thresher Place	Dryden Montessori School
Turkey Hill Road	Varna Fire Station
Walker Road	Utility Facility
Wood Road	Etna Fire Department
Yellow Barn Road	Water Facility

Village of Dryden Roads

Road/Road Section	Reason for Priority
East Main Street	Public Works and Highway Facility; Town Hall; Town Clerk and Court Offices; Elementary School Bus Garage
West Main Street	Southworth Library; Dryden Historical Society; U.S. Post Office
Evergreen Street	Franziska Racker Center
Montgomery Street	Dryden Elementary School Maintenance Garage
North Street	Dryden Fire Station and Ambulance
South Street	Village Hall; Village DPW; Police Department
Union Street	Dryden Elementary School
Wall Street	Wastewater Plant

Town of Enfield Roads

Road/Road Section	Reason for Priority
Enfield Main Road	Enfield Fire Station; Enfield Elementary School; Enfield Town Hall
Tucker Road	Communications Facility

Village of Freeville Roads

Road/Road Section	Reason for Priority
Main Street	Freeville Elementary School; U.S. Post Office
Factory Street	Freeville Clerk's Office
Union Street	Freeville Fire Station
Freeville Road	Wastewater Pump House

Town of Groton Roads

Road/Road Section	Reason for Priority
Stevens Road	McLean Fire Department
School Street	Cassavant Elementary School; U.S. Post Office
Spring Street Extension	Highway Garage
Church Street	Utility Facility
Sovocool Hill Road	Utility Facility
Sincerbeaux Road	Communications Facility

Village of Groton Roads

Road/Road Section	Reason for Priority
Conger Blvd	Town Hall; Municipal Light and Power Plant
East Cortland Street	Groton Fire Station and Ambulance; Village Offices; Police Department
Elm Street	Groton Elementary School
Peru Road	Groton Central School District; High School; Middle School
Sykes Street	Groton Community Health Care
West South Street	Communications Facility

City of Ithaca Roads

Road/Road Section	Reason for Priority
Cherry Street	Sewage Pump Station
Cliff Street	Water Pump Station
Coddington Rd	Water Tank
College Ave	Ithaca Fire Department
Commercial Avenue	Tompkins County Recycling and Solid Waste
Cornell Street	Water Tank
East Buffalo Street	County Facilities, Sewage Pump Station
East Clinton Street	Ithaca City Court, Police Department
East Court Street	Governor Daniel D. Tompkins Building
East Green Street	City Hall; Tompkins County Library
Elmira Road	NYS Facility
Fall Creek Drive	Utility Facility
First Street	City Water and Sewer Division
Forest Home Drive	Water Facility
Fourth Street	NYSEG Utility Facility
Franklin Street	Water and Sewer Facility
Fulton Street	Ithaca Healthcare Center
Giles Street	Water Treatment Facilities
Cliff Park Road	Water Tank
Hector Street	NYSEG Utility Facility

Road/Road Section	Reason for Priority
James L Gibbs Drive	Youth Bureau
North Tioga Street	Ithaca Town Hall; Tompkins County Courthouse; Communications Facility
North Titus Ave	NYSEG Utility Facility
Oakwood Lane	Water Tank
Pier Road	Public Works Facility; Fire Department Training Center
South Cayuga Street	NYSEG Facilities
South Meadow Street	Sewage Pump Station
Spencer Road	Municipal Facility
Statler Drive	Police Facility
Sunrise Road	Military Facility (Not sure if this is still active)
Taughannock Boulevard	Military Facility, Sewage Pump Station
Third Street	County Facility; Wastewater Treatment Plant; Utility Facility
Water Street	Water Treatment Plant
West Buffalo Street	Police Facility
West Green Street	Fire Department
West Village Place	Water Tank

Town of Ithaca Roads

Road/Road Section	Reason for Priority
Bostwick Road	School District Facility
Coddington Rd	Utility Facility
Danby Road	Fire Department
Dates Drive	Medical Center
Dryden Road	Utility Facilities
East King Road	NYSEG Substation
East Shore Drive	Sewage Plant; Utility Facilities
Energy Drive	Utility Facilities; Electric Substation
Farm Pond Road	Utility Facilities; College Facilities
Felis Drive	Water Facilities
Flora Brown Drive	Utility Facility
Forest Home Drive	Water Facility
Giles Street	Dam Facility
Harris B Dates Road	Government Facilities
Hungerford Hill Road	Utility Facility
Maple Ave	NYSEG Substation; Water Tank
Mitchell Street	NYSEG Facility
Pearsall Place	Utility Facility
Pidgeon Place	Water Tanks
Pine Tree Road	Wastewater Pump

Road/Road Section	Reason for Priority
Ridgecrest Road	Water Tank
Sapsucker Woods Road	Water Tank
Seven Mile Drive	Public Works Facility
Slaterville Road	Dam Facility
Teton Court	Water Tank
Trumansburg Road	Government Facilities; Fire Station; Electric Substation; Water Tank

Town of Lansing Roads

Road/Road Section	Reason for Priority
Auburn Road	Lansing Fire Station 4; Town Hall; Town Garage
Dublin Road	Communications Facility
Ludlowville Road	Lansing Middle School; Communications Facility
Ridge Road	Lansing Fire Central Station; Lansing Fire Station 3; RC Buckley Elementary School; Lansing High School

Village of Lansing Roads

Road/Road Section	Reason for Priority
Ascot Place	Ithaca Montessori School
Brown Road	U.S. Geological Survey Office; County Health Department; Airport; County Fire and Rescue; County Department of Emergency Response
Kline Boulevard	Airport
North Triphammer Road	Village of Lansing Offices; Highway Garage
Oakcrest Road	Lansing Fire Station 5

Town of Newfield Roads

Road/Road Section	Reason for Priority
Benjamin Hill Road	Utility Facility
Elmira Road	Utility Facility
Irish Hill Road	Utility Facility
Main Street	Newfield High School; Newfield Middle School; Newfield Elementary School; Newfield Fire Department; Newfield Town Hall; Highway Department; U.S. Post Office
Newfield Depot Road	Railroad Depot
Pine Circle	Utility Facility
Prott's Hill Road	Utility Facility
Shelter Valley Road	Water Tank
Test Road	NYSP
Tower Road	Utility Facilities

Village of Trumansburg Roads

Road/Road Section	Reason for Priority
Corey Street	Trumansburg Water Treatment Pump House
East Main Street	Village Offices; Library
Elm Street	Town of Ulysses Hall, Police Department
Halsey Street	Water Tank
Lake Street	Sewage Facility
Union Street	Communications Facility
West Main Street	Trumansburg Fire Department; Nursery School; U.S. Post Office
Whig Street	Trumansburg Central School District and School Buildings

Town of Ulysses Roads

Road/Road Section	Reason for Priority
Colegrove Road	Ulysses Town Highway Barn
Indian Fort Road	Utility Facility
Iradell Road	Water Tank

Appendix K DEBRIS ZONE MAPS

The County and municipalities are divided into debris management zones as shown on the following pages.

Tompkins County

[INSERT MAP]

Town of Caroline

[INSERT MAP]

Village of Cayuga Heights

[INSERT MAP]

Town of Danby

[INSERT MAP]

Town of Dryden

[INSERT MAP]

Village of Dryden

[INSERT MAP]

Town of Enfield

[INSERT MAP]

Village of Freeville

[INSERT MAP]

Town of Groton

[INSERT MAP]

Village of Groton

[INSERT MAP]

City of Ithaca

[INSERT MAP]

Town of Ithaca

[INSERT MAP]

Town of Lansing

[INSERT MAP]

Village of Lansing

[INSERT MAP]

Town of Newfield

[INSERT MAP]

Village of Trumansburg

[INSERT MAP]

Town of Ulysses

[INSERT MAP]

Appendix L
HEALTH AND SAFETY STRATEGY

Health and Safety Strategy

Purpose

The purpose of this health and safety strategy is to provide guidance regards to debris removal activities for Tompkins County, New York (County) and its municipalities. These are recommended baseline safety provisions that are designed to function in accordance with the County's and municipalities' safety programs. Ultimately, health and safety are the responsibility of all staff and contracted parties involved in debris removal activities. This document will outline some of the general steps necessary to provide a safe work environment for monitoring staff and debris removal staff. In addition, this document will identify some representative work hazards and the appropriate measures to reduce risk of injury.

1.0 Dissemination of Information

County staff with responsibilities in debris management, monitoring staff, and debris removal staff will be provided with this document. Supervisors from County and municipal departments and contracted staff and will be expected to disseminate the information and guidelines to their respective personnel. A copy of the document should be available for consultation. In addition, elements of the document will be reviewed periodically during operations to increase worker awareness.

2.0 Compliance

The monitoring staff and debris removal staff and contractors supervisors are responsible for health and safety compliance of their respective personnel and contractors. Any crews or individuals that are not compliant shall be suspended from debris removal activities until the situation is remedied. Frequent offenders of safety policies and procedures will be dismissed from the debris management operation entirely.

3.0 Job Hazard Assessment

Though debris removal activities are fairly similar among events, assessing the particular hazards of each disaster is an important part of maintaining health and safety for the debris removal workers. At a minimum, the following areas of focus should be considered as part of job hazard assessment:

- **Disaster Debris** – Disasters that result in property damage typically generate large quantities of debris that must be collected and transported for disposal. The type of debris varies depending on the characteristics of the region (e.g., terrain, climate, dwelling and building types, population) and the debris-generating event (e.g., type, event strength, duration). In addition, the disaster debris produces a host of uneven surfaces, which must be negotiated.
- **Debris Removal** – Often the removal of disaster debris involves working with splintered, sharp edges of vegetative or construction material debris. Many disasters involve heavy

rains or flooding. Consequently, disaster debris is damp and heavier than usual. As weights increase, so does the risk of injury.

- **Removal Equipment** – In most disasters, debris must be removed from the public right-of-way (ROW) to provide access for emergency vehicles and subsequent recovery efforts. Debris collection and removal requires the use of heavy equipment and power tools to trim, separate and clear disaster debris.
- **Traffic Safety** – The ROW is located primarily on publicly-maintained roads. As a result, much of the debris removal process takes place in traffic of varying levels of congestion. In addition, disasters often damage road signs, challenging safety on the road.
- **Wildlife Awareness** – Disasters are traumatic events for people as well as wildlife. Displaced animals, reptiles and insects pose a hazard to debris removal workers.
- **Debris Disposal** – After disaster debris is collected it is often transported to a Debris Management Site (DMS). Upon entry to a DMS, the monitoring staff will assess the volume of disaster debris being transported. The collection vehicle will then dispose of the disaster debris and the debris will be reduced either through a grinding operation, mulching, recycling, or other method of disposal. The DMS is a common area for injury. Response and recovery workers in this environment are more likely to be exposed to falling debris, heavy construction traffic, noise levels, and dust and airborne particles from the reduction process.
- **Climate** – Debris-generating disasters often occur in areas or seasons with extreme weather conditions. The effects of temperature and humidity on physical labor must be monitored, and proper work-rest intervals must be assessed.

4.0 Administrative and Engineering Controls

The use of administrative and engineering controls can greatly reduce the threats to public health and safety in debris removal activities. Some common administrative and engineering controls used in the debris removal process are:

Collection Operations

- Conduct debris removal operations during daylight hours only.
- Limit cleanup operations to one side of the road at a time.
- Limit collection work under overhead lines.
- Inspect piles before heavy equipment use to remove if found as hazardous obstructions.
- Assure all collection vehicles have properly functioning lights, horns, and backup alarms.
- Load collection vehicles properly (not overloaded or unbalanced).
- Cover and secure loads, if necessary.
- When monitoring the collection process, stay alert in traffic and use safe driving techniques.

Power Tools

- Inspect all power tools before use.
- Do not use damaged or defective equipment.
- Use power tools for their intended purpose.
- Avoid using power tools in wet areas.

Debris Reducing Machinery (Grinders/Wood Chippers)

- Do not wear loose-fitting clothing.
- Follow the manufacturer's guidelines and safety instructions.
- Guard the feed and discharge ports.
- Do not open access doors while equipment is running.
- Always chock the trailer wheels to restrict rolling.
- Maintain safe distances.
- Never reach into operating equipment.
- Use lock-out/tag-out protocol when maintaining equipment.

DMS/Disposal Operations

- Use jersey barriers and cones to properly mark traffic patterns.
- Use proper flagging techniques for directing traffic.
- Monitor towers must not exit into traffic and should have hand and guard rails to reduce trips and falls.
- Monitor towers must have properly constructed access stairways with proper treads and risers and proper ascent angle (4:1 height/width ratio).
- Monitor towers must be surrounded by jersey barriers which protect the tower and monitors from being struck by inbound or outbound collection vehicles.
- Monitor towers should be located upwind from dust and particulate generating activities.
- Use a water truck to spray the site daily to control airborne dust and debris.

5.0 Personal Protective Equipment

Personal Protective Equipment (PPE) is the last resort to providing a safe working environment for workers. PPE does not eliminate or even reduce hazards as administrative and engineering controls do. PPE works to reduce the risk of injury by creating a protective barrier between the individuals and workplace hazards.

Proper use of PPE includes using PPE for its intended purpose. For example, using the wrong type of respirator might expose the worker to carcinogenic particulates. Properly fitting the equipment to the user may require examination by a medical professional. PPE that does not fit well will not provide maximum protection and will decrease the likelihood of the individual continuing to use the equipment. In addition, improper use may result in serious injury or death. The proper use of the equipment is outlined in detail in the manufacturer's instructions.

The following PPE may be applicable in standard ROW, Right-of-Entry, and vegetative and construction & demolition (C&D) debris removal activities:

- **Head Protection** – Equipment designed to provide protection for an individual’s head against hazards such as falling objects or the possibility of striking one’s head against low hanging objects. PPE used to protect the head must comply with ANSI Z89.1-2014, “American National Standard for Personnel Protection – Protective Headwear for Industrial Workers – Requirements.”
- **Foot Protection** – Equipment designed to provide protection for an individual’s feet and toes against hazards such as falling or rolling objects, objects that may pierce the sole or upper section of the foot, etc. PPE used to protect the feet and toes must comply with F 2413, Specification for Performance Requirements for Protective Footwear.”
- **Hand Protection** – Equipment designed to provide protection for an individual’s hands against hazards such as sharp or abrasive surfaces. The proper hand protection necessary is dependent upon the situation and characteristics of the gloves. For instance, specific gloves would be used for protection against electrical hazards while the same gloves may not be appropriate in dealing with sharp or abrasive surfaces.
- **Vision/Face Protection** – Equipment designed to provide protection for an individual’s eyes or face against hazards such as flying objects. PPE used to protect eyes and face must comply with ANSI/ISEA Z87.1-2010, “Occupational and Educational Personal Eye and Face Protection Devices.” Again, the proper eye/face protection necessary is dependent upon the situation and characteristics of the equipment. For instance, eye and face protection used by individuals who are welding may not be appropriate for individuals operating a woodchipper.
- **Hearing Protection** – Equipment designed to provide protection for an individual’s hearing against prolonged exposure to high noise levels. According to OSHA, the permissible level of sound is an average of 90 decibels over the course of an eight (8) hour workday. Above the sound exposure level, hearing protection is required. PPE used to protect hearing must comply with ANSI S3.19-1974, “American National Standard Practice for Personal Protection – Hearing Protection.”
- **Respiratory Protection** – Equipment designed to provide protection for an individual’s respiratory system against breathing air contaminated with hazardous gases, vapors, airborne particles, etc. PPE used to protect the respiratory system must comply with ANSI Z88.2-1992. In addition, the use of respiratory protection requires a qualitative fit test and in some cases a pulmonary fit test by a licensed medical professional.

6.0 PPE Debris Removal Activity

PPE requirements are made based upon the results of the job hazards assessment. The following list of PPE is organized by debris removal activity and is meant to be a representative list. Specific PPE requirements vary from location to location. In general, individuals involved in the debris

removal process should personally monitor water consumption to avoid dehydration and use appropriate skin protection (breathable clothes, light colors, sunscreen, etc.). Ultimately, the selection of PPE is the responsibility of the monitoring and debris removal staff and contractors' supervisors.

Debris Collection Monitoring

The hazards of disaster debris collection monitoring include the following: struck by vehicles, falls or trips on uneven surfaces, cuts, abrasions or punctures from vegetative or C&D sharps. PPE requirements include:

- Reflective vest.
- Foot protection (rugged shoes or boots, steel toe and shank if required).
- Long pants.

Debris Disposal Monitoring

The hazards of disaster debris disposal monitoring include the following: struck by or caught in/between vehicles, falls or trips on stairs or uneven surfaces, cuts, abrasions or punctures from vegetative or C&D sharps and struck by falling disaster debris. Monitor towers must be equipped with a first aid kit. PPE requirements include:

- Reflective vest.
- Foot protection (rugged shoes or boots, steel toe if required).
- Long pants.
- Hard hat.

Debris Removal

The hazards of disaster debris removal include the following: struck by vehicles, falls or trips on uneven surfaces, cuts, abrasions or punctures from vegetative or C&D sharps and airborne debris. In addition, PPE requirements include:

- Reflective vest.
- Vision and hearing protection.
- Foot protection (rugged shoes or boots, steel toe and shank if required).
- Long pants.

Debris Disposal and Reduction

The hazards of disaster debris disposal and reduction include the following: struck by or caught in/between vehicles, falls or trips on uneven surfaces, cuts, abrasions or punctures from vegetative or C&D sharps, struck by falling disaster debris and airborne particles. PPE requirements include:

- Reflective vest.
- Foot protection (rugged shoes or boots, steel toe if required).

- Vision and hearing protection.
- Long pants.
- Hard hat.

Debris Cutting and Trim Work

The hazards of disaster debris cutting and trimming work include, but are not limited to, struck by or caught in/between vehicles, falls or trips on uneven surfaces, cuts, abrasions or punctures from power tools, vegetative or C&D sharps, struck by falling disaster debris and airborne particles. PPE requirements include:

- Reflective vest.
- Hand and foot protection (rugged shoes or boots, steel toe if required).
- Vision and hearing protection.
- Long pants.
- Gloves.
- Hard hat.

7.0 In the Event of Injury

In an emergency injury situation call 911 immediately or transport the injured worker to the emergency room. If the injury is not an emergency, provide first aid to the level of your training and ability and seek medical care as needed.

County employees should report the injury to their supervisor, the project safety officer, and follow instructions from them regarding the reporting of the injury.

Contractors should report any injuries to their supervisor, as well as the project Safety Officer.

For additional information regarding health and safety requirements, please contact your supervisor or the Safety Officer.

Appendix M FIELD DOCUMENTS

Force Account Labor Summary Record¹
Force Account Equipment Summary Record²
Load Ticket
Debris Haul Out Ticket
Unit Rate Ticket
Disposal Monitoring Log
Truck Certification Form and Instructions

¹ Force Account Labor Summary Record – FF90-123 can be found at https://www.fema.gov/sites/default/files/2020-06/fema-public-assistance-force-account-labor-summary_Form009-0-123_06-2020.pdf

² Force Account Equipment Summary Record can be found at https://www.fema.gov/sites/default/files/2020-06/fema-public-assistance-force-account-equipment-summary-record_form09-0-127_06-2020.pdf


DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY FORCE ACCOUNT LABOR SUMMARY RECORD		PAGE <input type="text"/> OF <input type="text"/>	O.M.B. No. 1660-0017 Expires December 31, 2011
APPLICANT	PA ID NO.	PROJECT NO.	DISASTER
LOCATION/SITE		CATEGORY	PERIOD COVERING
DESCRIPTION OF WORK PERFORMED			
DATES AND HOURS WORKED EACH WEEK			
NAME	DATE		COSTS
JOB TITLE	REG.	O.T.	TOTAL HOURS
NAME	REG.	O.T.	HOURLY RATE
JOB TITLE	REG.	O.T.	BENEFIT RATE/HR
NAME	REG.	O.T.	TOTAL HOURLY RATE
JOB TITLE	REG.	O.T.	TOTAL COSTS
NAME	REG.	O.T.	
JOB TITLE	REG.	O.T.	
NAME	REG.	O.T.	
JOB TITLE	REG.	O.T.	
TOTAL COSTS FOR FORCE ACCOUNT LABOR REGULAR TIME			\$ _____
TOTAL COST FOR FORCE ACCOUNT LABOR OVERTIME			\$ _____
I CERTIFY THAT THE INFORMATION ABOVE WAS OBTAINED FROM PAYROLL RECORDS, INVOICES, OR OTHER DOCUMENTS THAT ARE AVAILABLE FOR AUDIT.			
CERTIFIED	TITLE	DATE	

DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY FORCE ACCOUNT EQUIPMENT SUMMARY RECORD		PAGE ____ OF ____	O.M.B. No. 1660-0017 Expires October 31, 2008												
APPLICANT	PROJECT NO.	DISASTER													
LOCATION/SITE	CATEGORY	PERIOD COVERING													
DESCRIPTION OF WORK PERFORMED															
TYPE OF EQUIPMENT <small>INDICATE SIZE, CAPACITY, HORSEPOWER, MAKE AND MODEL AS APPROPRIATE</small>	EQUIPMENT CODE NUMBER	OPERATOR'S NAME	DATES AND HOURS USED EACH DAY							COSTS					
			DATE	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	TOTAL HOURS	EQUIPMENT RATE	TOTAL COST		
GRAND TOTAL															
I CERTIFY THAT THE ABOVE INFORMATION WAS OBTAINED FROM PAYROL RECORDS, INVOICES, OR OTHER DOCUMENTS THAT ARE AVAILABLE FOR AUDIT.															
CERTIFIED												TITLE		DATE	

Print Form

Load Ticket		Ticket No. 0012345	
Municipality (Applicant)		Prime Contractor	
		Sub-Contractor	
Truck Information			
Truck No		Capacity	
Truck Driver (print legibly)			
Loading Information			
Loading	Time	Date	Inspector/Monitor
Location (Address or Cross Streets)			
When Using GPS Coordinates use Decimal Degrees (N xx.xxxxx)			
N		W	
Unloading Information			
Debris Classification		Estimated %, CYs, or Actual Weight	
<input type="checkbox"/> Vegetation <input type="checkbox"/> C&D <input type="checkbox"/> White Goods <input type="checkbox"/> HHW <input type="checkbox"/> Other* See Below			
Unloading	Time	Date	Inspector/Monitor
DMS Name and Location			
*Other Debris Explanation		Original: Applicant Copy 1: _____ Copy 2: _____ Copy 3: _____	

DEBRIS HAULOUT TICKET		TICKET NUMBER
		#
Applicant:	Disaster #	
Program:	Contractor:	
Truck # :	Truck Capacity:	
Driver's Name:		
TDSR Site:		
Haulout Debris Classification:		
<input type="checkbox"/> Vegetative Mulch	<input type="checkbox"/> White Goods	
<input type="checkbox"/> Ash	<input type="checkbox"/> Hazardous Materials / Toxic	
<input type="checkbox"/> C & D Mulch	<input type="checkbox"/> Household Hazardous Waste	
<input type="checkbox"/> C & D Compacted	<input type="checkbox"/> Other: _____	
Loading Time:	Loading Date:	
Monitor Signature:	I.D. #	
<div style="border-top: 2px dashed black; height: 1px;"></div>		
Disposal Site Location:	Scale Ticket #	
Load Call (%):	Weight (tons / lbs.)	
Disposal Time:	Disposal Date:	
Monitor Name (print):	I.D. #	
Contractor Name (print):	I.D. #	
Notes:		
<i>White - Applicant Green and Yellow - Contractor Pink - Driver Gold - Site Copy</i>		

 TETRA TECH		UNIT RATE TICKET #	
Applicant:		Disaster #	
Programs <input type="checkbox"/> Parks <input type="checkbox"/> Right-of-Entry <input type="checkbox"/> Time & Materials <input type="checkbox"/> ROW Lean/Hanger <input type="checkbox"/> Stumps <input type="checkbox"/> _____			
Contractor:		Crew #:	
Survey Item #:		GPS: N: W:	
House #:	Street Name:	Zone #:	
Parcel #:		ROE #:	
Contract Rate Code: 1 3 5 7 9 2 4 6 8 Other: _____			
Contract Rate Sub-Code A C E G I B D F H Other: _____			
Unit Count:		Measurement:	
Start Time:	A P	End Time:	A P
Date:		Date:	
Monitor Name (print):		I.D. #	
Contractor Name (print):		I.D. #	
Notes:			
White - Applicant Green and Yellow - Contractor Pink - Crew Chief Gold - Site Copy			
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Truck Information

Make

Year

Color

License

--	--	--	--

Truck Measurements

Performed By: _____

Date: _____

Volume Calculated By: _____

Date: _____

Both Checked By: _____

Date: _____

Driver Information

Name: _____

Address: _____

Phone Number: _____

Owner Information

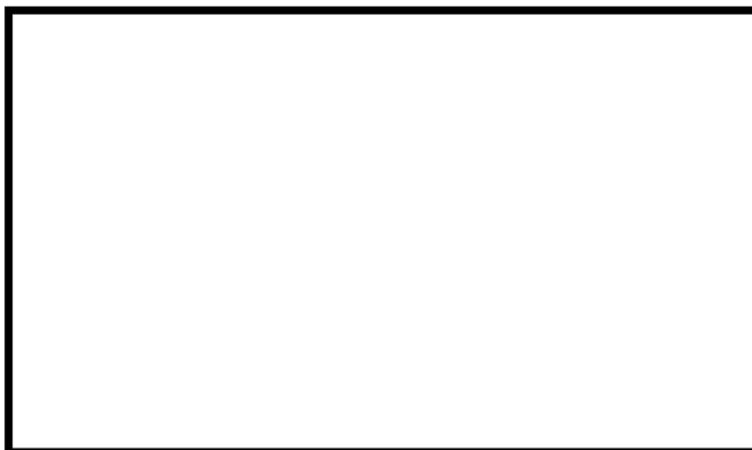
Name: _____

Address: _____

Phone Number: _____

Truck Identification: _____

Truck Capacity: _____



Photo

Truck Certification Form Calculation Instructions

Instructions to take the necessary dimensions of corner wedge (refer to Figure B-6):

“a”: Along the side of the bed, measure the distance from the point where the rounded part of the bed starts, to the front corner of the bed.

“b”: Equal to “a.”

“c” and “d”: Along the side of the bed, mark the point where the rounded part of the bed starts, and along the front of the bed, also mark the point where the rounded part of the bed ends. Run a string between the two points and measure the distance between them; half of that distance is “c” and half of the distance is “d” (“c” and “d” are equal).

“e”: Measure the distance from the mid-point of the string that was stretched from the side to the front of the bed in the previous step to the rounded part of the bed.

Extra trailer: The volume calculations for the extra trailer would be simply length x width x height if the extra trailer has a rectangular bed. However, if the extra trailer also has round corners at the front, the volume calculation would be the same as explained above.

Instructions to take the necessary dimensions of round bottom truck (refer to Figure B-6):

“a”: The width of the bed.

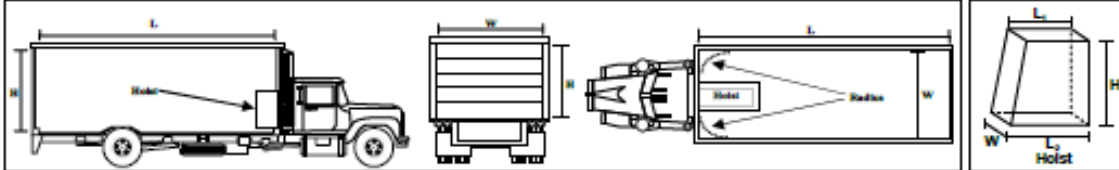
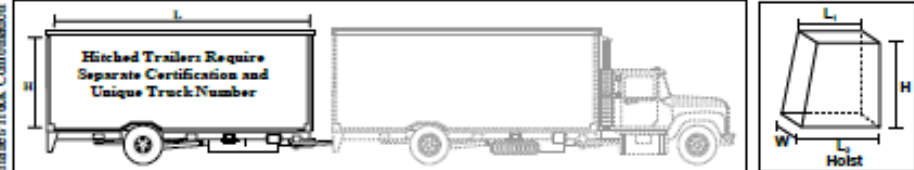
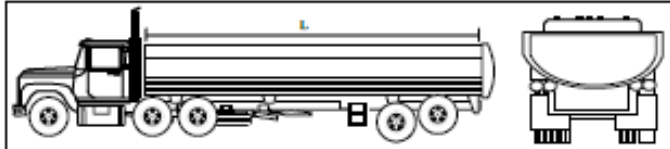
“b”: The depth of the vertical portion (the side) of the bed.

“c” and “d”: Both are equal to half the width of the bed.

“e”: Run a string between the lower ends of the vertical portions of the bed (the sides), and measure the distance from the mid-point of the string to the bottom of the bed.

NOTE: All dimensions used in the above formulas must be in feet, with inches converted to fractions of feet, using the following conversions (for example, 8 feet, 5 inches should be written as 8.42 feet):

1 inch = .08 foot	7 inches = .58 foot
2 inches = .17 foot	8 inches = .67 foot
3 inches = .25 foot	9 inches = .75 foot
4 inches = .33 foot	10 inches = .83 foot
5 inches = .42 foot	11 inches = .92 foot
6 inches = .50 foot	

DUMP TRUCK			
Measurements			
Truck Measurements	Length (L) = <input style="width: 80px;" type="text"/>	Width (W) ft = <input style="width: 80px;" type="text"/>	Height (H) ft = <input style="width: 80px;" type="text"/>
Hoist Measurement	Length ₁ (L ₁) ft = <input style="width: 80px;" type="text"/>	Width _H (W _H) ft = <input style="width: 80px;" type="text"/>	Height _H (H _H) ft = <input style="width: 80px;" type="text"/>
	Length ₂ (L ₂) ft = <input style="width: 80px;" type="text"/>		
Radius	Radius ft = <input style="width: 80px;" type="text"/>	Height (H) = <input style="width: 80px;" type="text"/>	
Calculations			
Bed Volume (Basic)	$(L \times W \times H) / 27 =$ <input style="width: 80px;" type="text"/>	+ <input style="width: 80px;" type="text"/>	Cubic Yards
Hoist Volume	$((L_1 + L_2) / 2 \times W_H \times H_H) / 27 =$ <input style="width: 80px;" type="text"/>	-	
Radius Volume	$(3.14 \times R^2 \times H) / 27 =$ <input style="width: 80px;" type="text"/>	-	
Total =	<input style="width: 160px;" type="text"/>		
Truck Measurements			
EXTRA TRAILER			
Measurements			
Truck Measurements (Basic)	Length (L) = <input style="width: 80px;" type="text"/>	Width (W) ft = <input style="width: 80px;" type="text"/>	Height (H) ft = <input style="width: 80px;" type="text"/>
Hoist Measurement	Length ₁ (L ₁) ft = <input style="width: 80px;" type="text"/>	Width _H (W _H) ft = <input style="width: 80px;" type="text"/>	Height _H (H _H) ft = <input style="width: 80px;" type="text"/>
	Length ₂ (L ₂) ft = <input style="width: 80px;" type="text"/>		
Radius	Radius ft = <input style="width: 80px;" type="text"/>	Height (H) = <input style="width: 80px;" type="text"/>	
Calculations			
Bed Volume (Basic)	$(L \times W \times H) / 27 =$ <input style="width: 80px;" type="text"/>	+ <input style="width: 80px;" type="text"/>	Cubic Yards
Hoist Volume	$((L_1 + L_2) / 2 \times W_H \times H_H) / 27 =$ <input style="width: 80px;" type="text"/>	-	
Radius Volume	$(3.14 \times R^2 \times H) / 27 =$ <input style="width: 80px;" type="text"/>	-	
Total =	<input style="width: 160px;" type="text"/>		
Trailer/Truck Combination			
ROUND BOTTOM TRUCK			
Measurements			
Truck Measurements	Length (L) ft = <input style="width: 80px;" type="text"/>	Diameter (D) ft = <input style="width: 80px;" type="text"/>	
Calculations			
Approx. Volume	$(3.14 \times (D/2)^2 \times L) / 27 =$ <input style="width: 160px;" type="text"/> cyd (round bottom portion only)		
Round Bottom Truck			Cubic Yards

Appendix N
SAMPLE RIGHT-OF-ENTRY AGREEMENT

SAMPLE RIGHT-OF-ENTRY AGREEMENT

ROE Number:

RIGHT OF ENTRY (ROE) AGREEMENT [Municipality]

I/We _____, the owner(s) of the property commonly _____ identified _____ as **(insert property address)** _____, do hereby request aid in removing debris to prevent further damage to my/our property and therefore grant and give freely and without coercion, the right of access and entry to said property to the [Municipality], Tompkins County, New York State, or the United States Government, its employees, agents, contractors, and subcontractors thereof, pursuant to all applicable laws for the purpose of removing and clearing any or all _____-generated debris of whatever nature from the above described property.

It is fully understood that this permit is not an obligation to perform debris clearance. The undersigned agrees and warrants to hold harmless, the [Municipality], Tompkins County, New York State, or the United States Government, their agencies, contractors, and subcontractors, for damage of any type, whatsoever, either to the above-described property or persons situated thereon and hereby release, discharge, and waive any action, either legal or equitable that might arise out of any activities on the above-described property. The property owner(s) will mark any _____-damaged sewer lines, water lines, and other utility lines located on the described property.

I/We (have ____, have not ____), (will ____, will not ____) receive(d) any compensation for debris removal from any other source including SBA, NRCS, private insurance, individual and family grant program, or any other public assistance program. I will report any insurance settlements made to me or my family for debris removal on this property that has been performed at government expense. I am fully aware that an individual who fraudulently or willfully misstates any fact in connections with this agreement shall be subject to a fine of not more than \$10,000 or imprisoned for not more than one year or both.

STRUCTURAL DEMOLITION/REMOVAL

I/We (do _____, do not _____) request demolition and/or removal of unsafe structures on the described property, and upon request, certify that I/we have dwelling, and/or appurtenant structures located on the property that are _____-damaged to the extent to be unsafe, uninhabitable and beyond reasonable repair. If the [Municipality] debris removal program allows structural demolition and/or removal of unsafe structures by this request, I/we extend right of entry for such purpose. By this authorization I/we state all personal effects of value to me/us have been removed from the property. I/We understand that the [Municipality] is not obligated to demolish or remove structures as part of the debris removal program, and that any structures that may be removed under the program are recognized to be unsafe.

SAMPLE RIGHT-OF-ENTRY AGREEMENT

For the considerations and purposes set forth herein, I hereby set my hand this _____ day of _____, 20_____.

Owner Signature: _____ Owner Signature: _____

Printed Name: _____ Printed Name: _____

Address Telephone

Witness (Signature/Printed Name): _____

Address: _____

Appendix O
HAZARDOUS STUMP EXTRACTION AND REMOVAL
ELIGIBILITY

HAZARDOUS STUMP EXTRACTION AND REMOVAL ELIGIBILITY

FEMA Public Assistance Program and Policy Guide FP 104-009-2 Chapter 7. Section I.B.3 Stump Removal

3. Stump Removal

For stumps that have 50 percent or more of the root-ball exposed, removal of the stump and filling the root-ball hole are eligible. If grinding a stump in-place is less costly than extraction, grinding the stump in-place is eligible.

Stump removal in areas with known or high potential for archeological resources usually requires that FEMA further evaluate and consult with the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO). If the Applicant discovers any potential archeological resources during stump removal, the Applicant must immediately cease work and notify FEMA.

Contracted Stump Removal

FEMA only reimburses contracted costs charged on a per-stump basis if:

- The stump is 2 feet or larger in diameter measured 2 feet above the ground; and
- Extraction is required as part of the removal.

The Applicant needs to ensure the price for stump removal includes extraction, transport, disposal, and filling the root-ball hole.

For stumps that have less than 50 percent of the root-ball exposed, FEMA only provides PA funding to flush cut the item at ground level and dispose of the cut portion based on volume or weight. Grinding any residual stump is not eligible.

For stumps smaller than 2 feet in diameter, or for stumps of any size that do not require extraction, FEMA only provides PA funding based on volume or weight as removal of these stumps does not require special equipment. If the Applicant claims reimbursement of these stumps on a per stump basis, FEMA limits PA funding based on a unit price for volume or tons, calculated using the Stump Conversion Table (Located on the following pages of this Attachment).

If the Applicant incurs additional costs in picking up stumps 2 feet or larger in diameter that the contractor did not extract, it should complete the Hazardous Stump Worksheet (located on the following pages of this appendix) and present documentation to substantiate the costs as reasonable based on the equipment required to perform the work.

4. Documentation Requirements

The Applicant must retain, and provide when requested, all of the following documentation to support the eligibility of contracted work to remove tree limbs, branches, stumps, or trees that are still in place:

- Specifics of the immediate threat with the location (geographic coordinates in latitude, longitude) and photograph or video documentation that establishes the item is on public property;

HAZARDOUS STUMP EXTRACTION AND REMOVAL ELIGIBILITY

- Quantity removed (Note: If a contractor charged an individual price for each limb, tree, or stump removed, FEMA requires the diameter of each item removed. For stumps, the measurement must be 2 feet up the trunk from the ground. For trees, it must be 4.5 feet up from the ground);
- Quantity, location, and source of material to fill root-ball holes; and
- Equipment used to perform the work.

STUMP CONVERSION TABLE

Diameter to Volume Capacity

FEMA quantifies the amount of cubic yards of debris for each size of stump based on the following formula:

$$\frac{[(\text{Stump Diameter}^2 \times 0.7854) \times \text{Stump Length}] + [(\text{Root-Ball Diameter}^2 \times 0.7854) \times \text{Root-Ball Height}]}{46,656}$$

- 0.7854 is one-fourth Pi and is a constant.
- 46,656 is used to convert cubic inches to cubic yards and is a constant.

The formula used to calculate the cubic yardage used the following factors, based upon findings in the field:

- Stump diameter measured 2 feet up from the ground
- Stump diameter to root-ball diameter ratio of 1:3.6
- Root-ball height of 31 inches

See the conversion chart on the following page.

HAZARDOUS STUMP EXTRACTION AND REMOVAL ELIGIBILITY

Stump Diameter(Inches)	Debris Volume (Cubic Yards)	Stump Diameter(Inches)	Debris Volume (Cubic Yards)
6	0.3	46	15.2
7	0.4	47	15.8
8	0.5	48	16.5
9	0.6	49	17.2
10	0.7	50	17.9
11	0.9	51	18.6
12	1	52	19.4
13	1.2	53	20.1
14	1.4	54	20.9
15	1.6	55	21.7
16	1.8	56	22.5
17	2.1	57	23.3
18	2.3	58	24.1
19	2.6	59	24.9
20	2.9	60	25.8
21	3.2	61	26.7
22	3.5	62	27.6
23	3.8	63	28.4
24	4.1	64	29.4
25	4.5	65	30.3
26	4.8	66	31.2
27	5.2	67	32.2
28	5.6	68	33.1
29	6	69	34.1
30	6.5	70	35.1
31	6.9	71	36.1
32	7.3	72	37.2
33	7.8	73	38.2
34	8.3	74	39.2
35	8.8	75	40.3
36	9.3	76	41.4
37	9.8	77	42.5
38	10.3	78	43.6
39	10.9	79	44.7
40	11.5	80	45.9
41	12	81	47
42	12.6	82	48.2
43	13.3	83	49.4
44	13.9	84	50.6
45	14.5		

HAZARDOUS STUMP EXTRACTION AND REMOVAL ELIGIBILITY

Figure O-1: Hazardous Stump Worksheet

Applicant: _____

Date: _____

Applicant Representative: _____

Signature: _____

FEMA Representative (if available) _____

Signature: _____

	Physical Location (i.e., Street address, road, cross streets, etc.)	Description of Facility (ROW, Park, City Hall, etc.)	Hazard Yes/No	Global Positioning System (GPS) Location	Tree Size (Diameter)	Eligible Yes/No	Fill for Debris Stumps In CY	Comments (See attached sketch, photo, etc.)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								