Wyandotte County, Kansas
Emergency Operations Plan

Debris Management

October 2017

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Acknowledgements

This plan was written with assistance from our intern, Nathan Wichman. He consulted with Jackie Miller in writing the plan under the guidance of our Emergency Management Director Matt May. Additionally, we would like to thank the Leavenworth County Emergency Management Director, Chuck Magaha for his guidance and knowledge.

I. Introduction

Purpose

Wyandotte County will adhere to this Debris Management Plan in response to a natural or manmade debris-generating event wherever possible. This plan is designed to identify agencies and activities that are involved in debris operations to ensure a coordinated response which achieves removal, storage, and final disposition of debris deposited along, or immediately adjacent to, public rights-of-way throughout Wyandotte County, including unincorporated areas. Wherever possible, all participating agencies will adhere to federal guidelines, exercise every effort to optimize reimbursement, and be environmentally conscious.

Scope

This Debris Management Plan will serve as a support addendum to the Wyandotte County Emergency Operations Plan (CEOP). It provides organizational structure, guidance, and standardized guidelines for field operations in the clearance, removal, and disposal of debris caused by a major debris-generating event. This Plan shall apply to all County departments and agencies. All cities within the jurisdictional boundaries are included in this plan.

The Plan is designed to assist Wyandotte County staff in implementing and coordinating the removal and disposal operations to maximize cleanup efficiencies. Expeditious debris removal and disposal actions will mitigate the threat to the health, safety, and welfare of all Wyandotte County residents.

Enforcement

Any person deviating from the provisions of this plan may be required, at the discretion of the County Administrator of Wyandotte County, to submit in writing within five (5) calendar days, an explanation for such deviation. The written explanation will be forwarded to the County Administrator's Office, and copies provided to the Director of Emergency Management, for final resolution if required. Be advised, if a city chooses not to participate in this plan, they may not receive Federal assistance, if and only if federal assistance is granted to the County.

II. Staff Roles and Responsibilities

Per the Wyandotte County Emergency Operations Plan, the Wyandotte County Public Works Department is responsible for coordinating debris removal and disposal throughout the County. Similarly, Wyandotte County solid waste is handled for the county through the existing contract with Waste Management Inc. For the incorporated areas, the cities are responsible for this coordination, within their jurisdiction, with the county providing secondary support if needed and available. In emergency situations, where limited local resources may require centralized coordination and prioritization, the Public Works Group (ESF 3) in the county Emergency Operations Center (EOC) will assume this responsibility.

The size and composition of staff organized to manage debris clearance, removal, and disposal issues depends on the magnitude of the disaster and number of available response personnel. Successful debris operations require collaborative efforts between departments within Wyandotte County and with specific external agencies that have regulatory authority over debris operations. Prospective staff members will receive general training and practice interface with other agencies responsible for debris management operations.

Immediately following a disaster event, a Debris Management Team will be established to facilitate successful coordination. Team members will consist of personnel from multiple Wyandotte County departments including Public Works, Emergency Management, Legal, Parks and Recreation, Planning, as well as other departments as applicable. Each member of the team is responsible for implementing portions of this Debris Management Plan in accordance with the planning goals and objectives of the County and in compliance with Federal, State, and local laws. A Debris Project Manager will be designated to serve as the primary coordinator for all operations.

The Debris Project Manager (DPM) – This position will serve as the primary decision-maker and Incident Commander for all debris management operations and has the following responsibilities:

- Will be knowledgeable of all applicable Wyandotte County processes, procedures, personnel, resources, and limitations;
- Overall responsibility for the operations, planning, logistics, financial, and administrative components of the debris management operations;
- Assign tasks to team members and support personnel to track the completion of tasks to ensure the quick and safe implementation of the debris management process;
- Will be in constant contact with the Wyandotte County Emergency Operations Center (EOC) regarding operational progress and planning needs; and
- Will be responsible for activation and deactivation of debris management operations.

Operations – This function is responsible for the supervision of force account (tracking additional hours of manpower required), contract resources, and overall project implementation. This section is responsible for oversight of the entire debris removal operation and will perform the following tasks:

- Allocation of equipment and resources for the response and recovery debris removal operation;
- Develop staff schedules and strategies to ensure efficient and effective response;
- Provide information, facilities, services, equipment, and materials to support the response and recovery activities;
- Monitor and direct Wyandotte County personnel and contract labor;
- Distribute response and recovery resources;
- Operate and manage debris collection, debris management site(s), and disposal strategies;

- Create a demolition strategy for structures (if necessary);
- Report progress for distribution to the debris management planning staff;
- Determine the need for all necessary permits or exemptions; and
- Assure compliance with all rules, regulations and permit stipulations.

Planning – This section supports all other debris management sections in a technical and planning role. This section also provides debris quantity assumptions, economic analysis, and feasible solutions for debris operations. The following tasks will be performed:

- Forecast debris volume based on disaster type;
- Develop an estimating strategy for post-disaster debris quantities;
- Strategize and map debris haul routes;
- Select debris management sites and design the site layout;
- Determine reduction and recycling means and methods (if possible);
- Identify and coordinate environmental issues with Public Works, the County Health Department, the Kansas Department of Health and Environment, and others as needed ;
- Assess available landfill space and determine if additional space is needed;
- Develop the debris collection strategy;
- Write contract scopes of work, conditions, and specifications;
- Coordinate with other local jurisdictions and state agencies for debris management operations and technical assistance;
- Establish a process for damage assessment and condemnation of buildings (including public and private properties); and
- Request required permits.

Finance & Administration – This function typically addresses finance, personnel, and legal issues. This section must establish a records management system in order to collect and keep all the documentation that may be required for Public Assistance grants.

Administration – This sub-function primarily monitors all debris management activities, including, but not limited to, the following:

- Personnel policies;
- Labor and equipment timesheets and summaries;
- Safety procedures;
- Contract procurement procedures;
- Management of established contracts;
- Billing and invoices (including debris hauler load tickets);
- Right-of-Entry and Hold Harmless agreements for private property debris removal and demolition (when applicable);
- Debris salvage and recycling value information; and
- Development and implementation of a document management process.

Contracting and Procurement – This sub-function maintains contracts in draft form ready for utilization, or have pre-qualified contractors in place prior to the event. This section will follow all applicable Wyandotte County procurement

policies in effect at the time of the disaster. Organizational elements for this section potentially include, but are not limited to, all of the following tasks:

- Develop contract requirements;
- Establish contractor qualifications;
- Distribute instructions to bidders;
- Advertise bids;
- Establish a pre-disaster list of pre-qualified contractors;
- Manage the contract scope of work; and
- Establish a post-disaster contractor procedure (if necessary).

Legal – This sub-function leads the review process for all legal matters in the debris management planning process. The following tasks may also be performed by the legal unit:

- Review all contracts;
- Review and/or establish a land acquisition process for temporary debris management sites;
- Review all insurance policies;
- Ensure environmental and historic preservation compliance before, during, and after operations. These functions may be tasked to the county Health Department, Water Pollution Control, or Code Enforcement;
- Ensure that site restoration and closure requirements are fulfilled;
- Review, establish, or revise a building condemnation processes if deemed necessary;
- Review, establish, or revise a legal process for private property demolition and debris removal; and
- Review right-of-entry and hold harmless agreements. (Attached)

Public Information – This section will distribute information and educate citizens about debris management operations. This function will report directly to the Debris Project Manager. Various types of information distribution will be used to distribute messages including, but not limited to, the following:

- Debris pickup schedules;
- Disposal methods and ongoing actions to comply with Federal, State, and local environmental regulations;
- Disposal procedures for self-help and independent contractors;
- Restrictions and penalties for creating illegal dumps;
- Curbside debris segregation instructions (Attached);
- Public drop-off locations for all debris types; and/or
- Process for answering the public's questions concerning debris removal.

Operational Safety Officer

The DPM will also assign personnel to monitor and report on the safety of all debris management operations. The responsibilities of this position include the following:

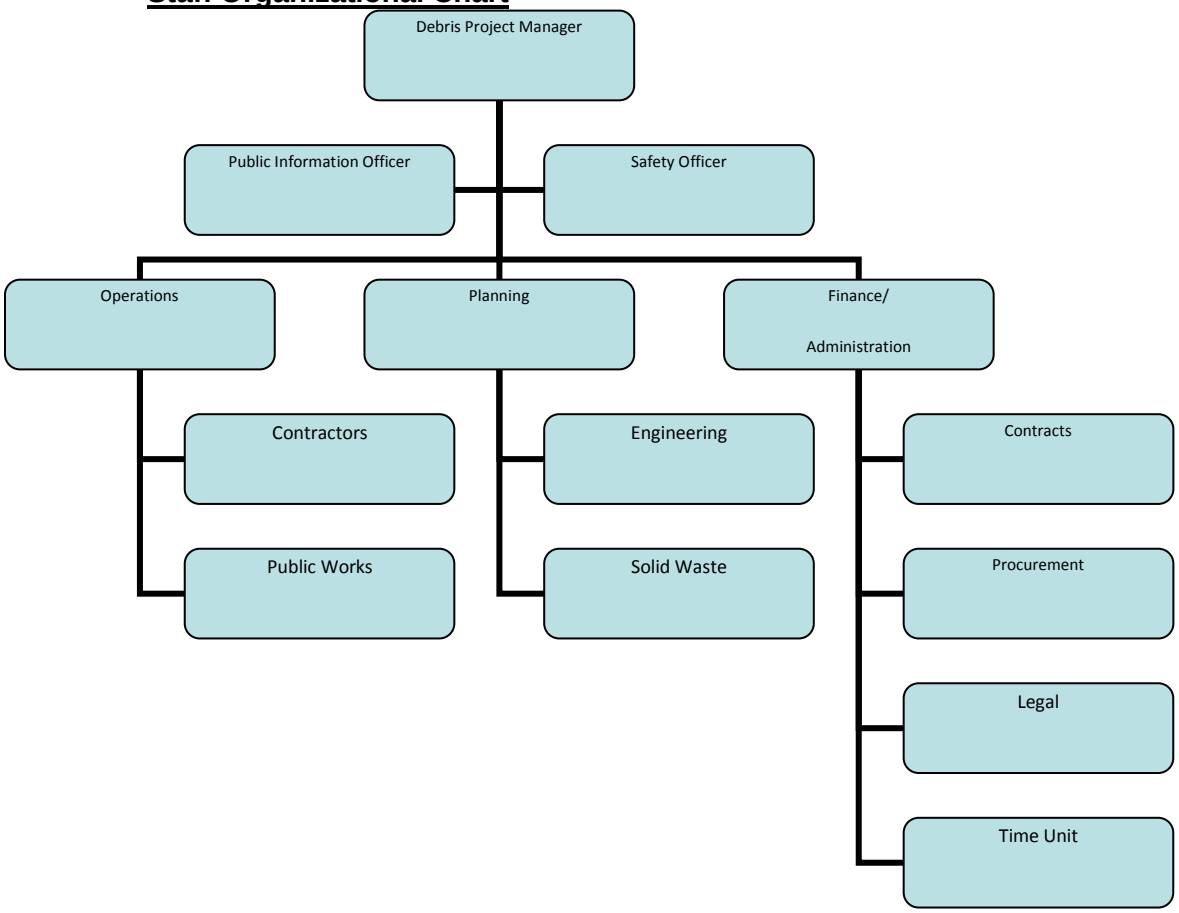
- Communicating timely information to the DPM and EOC regarding the safety status of the debris clearing, removal, and disposal operations;
- Coordinate with the DPM to assure the appropriate Responder Safety Training is provided;
- Ensure Wyandotte County Personnel follow all Kansas Department of Labor rules and regulations;
- Monitor contractor compliance with OSHA rules and regulations;
- Report and address any accidents or injuries that occur during operations;
- Coordinate with the DPM to ensure a site-specific Safety and Health Plan is created; and
- Provide media relations information regarding safety concerns with the DPM and acting public information officer.

Attachment G provides a detailed list of safety regulations and hazards that will impact debris management operations.

Support Staff

Support staff will be assigned as needed to functional and sub functional areas to ensure efficient and effective response. Assignments and supervision will follow the Incident Command System.

Staff Organizational Chart



Suggested Personnel

The following Wyandotte County personnel are recommendations to fill the command-level positions required for debris management operations:

Debris Project Manager:	Director of Public Works or the Emergency Management will assign
Public Information Officer:	County Administrator's Office
Safety Officer:	Public Works
Operations:	Public Works
Planning:	Planning Department
Finance/Administration:	Finance Department

Additional personnel will be assigned as needed and available to relieve these positions and/or to expand operations to meet growing debris management needs.

Training Schedule

All participating personnel will be trained on this debris management plan in accordance with pre-established internal policies as required.

Staffing: Needs, Procedures and Assignments

During debris removal events, Wyandotte County Public Works personnel will be the first workers utilized as directed by the DPM. Crew assignments will be based upon event needs and will be diverted from routine public works operations as necessary and where needed. If the need exceeds the capabilities of the Public Works department, other Wyandotte County resources, such as Parks and Recreation staff, will be requested. Outside contractors will be utilized to assist the local workforce as needed, primarily in the recovery period of debris management. Wyandotte County Public Works will continue to coordinate and have overall management responsibility regardless of the makeup of the resources.

III. Debris Management Situation and Assumptions

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (P.L. 93-28), as amended, authorizes the FEMA Public Assistance Program to award Federal funding to State and local governments, Federally recognized tribes, and eligible private non-profit organizations in order to assist them in their disaster response and recovery activities.

FEMA characterizes work eligible for Public Assistance grants as either emergency or permanent work. Debris management activities are grouped into Category A (Debris Removal) and Category B (Emergency Protective Measures). Debris management activities in these categories must meet all of the following:

- Be required as a result of the disaster event;
- Be located within a designated disaster area;
- Be the legal responsibility of the local government entity;

- Be in the public interest, which is defined as work necessary to meet the following:
    - Eliminate immediate threats to life, public health, and safety;
    - Eliminate immediate threats of significant damage to improved public or private property;
    - Ensure economic recovery of the affected community to the benefit of the community-at-large; or
    - Mitigate the risk to life and property by removing substantially damaged structures and associated appurtenances as needed to convert property acquired through a FEMA hazard mitigation program to use compatible with open space, recreation, or wetlands management practices
- Be of a reasonable cost, which is defined as: a cost, which in its nature does not exceed that which would be incurred by a prudent person under the circumstance prevailing at the time the decision was made to incur the cost.

For debris removal work, per FEMA's 2017 Public Assistance Debris Management Pilot Program, straight-time labor and overtime costs (including benefits) are eligible for permanent employees, reassigned employees, and seasonal employees (used for disaster specific work during the season of anticipated employment).

Types of Disaster Events

Debris forecasting predicts the amount and type of debris prior to a disaster, whereas debris estimating quantifies the amount of debris after the disaster. By forecasting the type and quantity of debris, the planning section can better define the scope of work for the debris management operation prior to the event.

The following are general descriptions of natural and manmade disasters that are typical for this area as identified by the Region L Multi-Jurisdictional Hazard Mitigation Plan 2013-2018, and the associated debris caused by each:

Tornadoes – Damage from tornadoes is caused by high-velocity rotating winds. The severity of the damage depends on the velocity of the tornado funnel and the length of time the funnel is on the ground; however, damage is generally confined to a narrow path, which can be up to one-half mile wide and from 100 yards to several miles long. Tornado debris consists primarily of vegetative debris, construction materials from damaged or destroyed structures, and personal property. Tornados are a high probability, high impact event

Floods - rainstorms, snow/ice storms, or reservoir failure can cause severe flooding – Damage to structures from flooding is caused either by precipitation inundation or high-velocity water flow. Flood debris may consist of sediment, wreckage, personal property, and sometimes hazardous materials deposited on public and private property. Additionally, heavy rains and floods may produce landslides, which create debris consisting of soil, gravel, rock, and sometimes construction material. Flooding is a high probability, high impact event.

Winter Storms – Debris from ice storms or snowstorms consists of significant amounts of vegetative debris and overhead utility service components. Winter storms are a high probability, high impact event.

Acts of Terrorism – Terrorism includes the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives. Since terrorism is regarded as a criminal act, it involves coordination with law enforcement authorities, the coroner's office, and health officials before debris is handled or disposed.

Debris generated as the result of a terrorist act is highly variable in both quantity and type, depending upon the specific means utilized by the terrorists. An act of terrorism could generate little to no debris at all, or could result in large quantities of multiple types of debris, potentially requiring highly specialized personnel, procedures, and equipment for its removal and disposal. Terrorism is a low probability, low to high impact event.

Earthquakes – Seismic forces along fault lines generate shock waves that cause ground shaking and surface ruptures. Wyandotte County lies to the east of the Nemaha fault line that runs north-northeast through Oklahoma, Central Kansas, and Nebraska. Because of the location, Wyandotte County would only receive minor physical effects from an earthquake. This type of damage consists of property damage, structural building materials, concrete, and asphalt. This type of event is a low probability, medium impact event.

Disaster Debris Streams

Typically, disasters generate a mix of different types of debris. The following figure summarizes the typical types of debris for each type of disaster.

		Typical Debris Streams								
		Vegetative	Construction & Demolition (C&D)	Personal Property/ Household Items	Hazardous Waste	Household Hazardous Waste (HHW)	White Goods	Soil, Mud, and Sand	Vehicles	Putrescent
Types of Disasters	Tornadoes	X	X	X	X	X	X	X	X	X
	Floods	X	X	X	X	X	X	X	X	X
	Earthquakes		X	X		X	X	X		X
	Winter Storms	X				X				X
	Acts of Terrorism	X	X	X	X	X	X	X	X	X

Forecasted Debris Types

Vegetative Debris – Consists of whole trees, tree stumps, tree branches, tree trunks, and other leafy material. The number of collection passes for vegetative debris is generally limited. Because of the large volume, vegetative debris should be reduced by mulching, grinding, or burning. Collections are typically based on the size of the vegetative material or by unit.

Hazardous Trees – Type of vegetative debris that is caused by the disaster, is an immediate threat to lives, public health, safety, or improved property, has a diameter breast height of six inches or greater, and one or more of the following criteria are met:

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

Trees determined to be hazardous and that have less than 50% of the root-ball exposed will be cut flush at the ground level. This cut portion will then be included with regular vegetative debris. Grinding of the resulting stump after the tree has been cut flush at the ground is not eligible debris management work.

Straightening and bracing are allowable emergency protective measures if they eliminate an immediate threat to lives, public health, safety, or improved property, and are less costly than removal and disposal of the hazardous tree.

FEMA encourages Applicants to procure branch or limb removal from trees on a one-time charge per tree basis as opposed to a unit price per limb or branch to facilitate more cost-effective operations. The Applicant must provide all of the following documentation to support the eligibility of removing tree limbs, branches, stumps, or trees that are still in place:

- Specifics of the immediate threat with the U.S. National Grid (USNG) location and photograph or video documentation that establishes the item is on public property;
- Diameter of each item removed (measurement must be 2 feet up the trunk from the ground for stumps and 4.5 feet up for trees);
- Quantity of material to fill root-ball holes; and
- Equipment used to perform the work.

Hazardous Limb (Hangers) – Type of vegetative debris that is eligible for removal if the limbs are:

- Located on improved property;
- Greater than two inches in diameter at the point of breakage; and

- Still hanging in a tree and extending over into a public-use area (e.g. parks, trails, sidewalks, paths, streets etc.) posing an immediate threat

Only the minimum amount of work necessary is eligible for hazardous limb removal. Pruning, maintenance trimming, and landscaping are not eligible. If the canopy of a tree located on public property extends over a public right-of-way, removal of hazardous limbs on the tree that extend over are eligible.

Hazardous Tree Stumps – Type of vegetative debris eligible for debris removal as a unit cost if all the following criteria are meet:

- It has 50% or more of the root-ball exposed;
- It is greater than 24" in diameter, measured 24" above the ground;
- It is on improved public property or a public right-of-way, and
- It poses an immediate threat to life, and public health and safety.

Hazardous Stump Removal

A hazardous tree or stump may be collected individually, while downed or fallen debris is collected from rights-of-way 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. Determining whether to remove a hazardous stump is difficult. FEMA has established criteria to assist in making these eligibility determinations, using objective information that can be collected in the field. A stump may be considered hazardous if the following criteria are met:

- 50% or more of the root-ball is exposed (less than 50% will be flush cut);
- Greater than 24" in diameter (as measured 24" above the ground);
- On improved property; and
- Poses immediate threat to life, public health, and safety.

FEMA's Hazardous Stump Worksheet and Stump Conversion Table are included in Appendices A and B, respectively.

Construction and Demolition (C & D) Debris -- Consists of damaged components of buildings and structures such as lumber and wood, gypsum wallboard, glass, metal, roofing material, tile, carpeting and floor coverings, window coverings, pipe, concrete, fully cured asphalt, equipment, furnishings, and fixtures.

Certain types of construction and demolition debris are reusable or recyclable. To conserve landfill space, it is prudent to separate materials for reuse, recycling, or directed final disposition. Because some construction and demolition debris may be hazardous (ex: asbestos coated materials), environmental regulations and ordinances must be included during all operations. Full documentation of these materials including debris origin, any processing (reduction or recycling), and the final disposition must be noted.

Typically, removal of construction by-products generated by repairs or rebuilding is covered by insurance policies and therefore is not part of the debris management process.

Hazardous Waste – A type of debris with properties that make it potentially harmful to human health or the environment. Generally, this type of material exhibits at least one of the following characteristics: ignitability, corrosivity, reactivity, or toxicity. Debris management activities are allowed for measures that address widespread hazardous materials contamination.

Household Hazardous Waste (HHW) – A type of debris composed of hazardous products and materials that are used and disposed of by residential, rather than commercial or industrial consumers. HHW includes some paints, stains, varnishes, solvents, pesticides, and other products or materials containing volatile chemicals that catch fire, react, or explode under certain circumstances, or that are corrosive or toxic.

White Goods – A type of debris defined as discarded household appliances such as refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, and water heaters. Many white goods contain ozone-depleting refrigerants, mercury, or compressor oils, which are prohibited by the Clean Air Act to be released into the atmosphere. Certified technicians must extract these refrigerants before disposing or recycling the white goods.

Electronic Waste (E-Waste) – A type of debris composed of electronics that contain hazardous materials such as cathode ray tubes or lithium ion batteries. Examples include computer monitors, televisions, and most personal electronics with a battery.

Soil and Mud – Floods often deposit soil and mud on improved public property and public rights-of-way. Facilities commonly impacted by this type of debris may include streets, sidewalks, storm and sanitary sewers, water treatment facilities, drainage basins, and swimming pools. This type of debris on improved property or public rights-of-way can be included in the debris management process; however, removal from streams and unimproved property cannot be included. Regularly scheduled maintenance reports for improved public property and public rights-of-way will be kept that indicate pre-disaster soil, mud, and sand levels.

Vehicles – A type of debris that includes vehicles that have been moved from private property onto improved public property and public rights-of-way. To remove this type of debris, the follow characteristics must be met:

- The vehicle or vessel presents a hazard or immediate threat that blocks ingress/egress in a public-use area;
- The vehicle is abandoned (e.g., the vehicle is not on the owner's property and the ownership is undetermined;
- Wyandotte County follows local ordinances and State law by securing ownership, and

- Wyandotte County verified chain of custody, transport, and disposal of the vehicle.

Putrescent Materials – Type of debris that will decompose or rot, such as animal carcasses and other fleshy organic matter. The USDA's National Resources Conservation Service (NRCS) has developed specific disposal guidelines for animal carcasses. Contact the USDA Animal and Plant Health Inspection Service at 301-734-8073 for additional information.

Infectious Waste – Type of debris capable of causing infections in humans, including contaminated animal waste, human blood and blood products, isolation waste, pathological waste, and discarded sharps (needles, scalpels, or broken medical instruments).

Chemical, Biological, Radiological and Nuclear-Contaminated Debris – Type of debris that has biological, chemical, radiological, or nuclear contamination. This type of debris usually would happen as the result of a Weapon of Mass Destruction (WMD) event. Eligibility for this type of debris removal will be made by FEMA based on applicable Federal statutes, regulations, policies, and other guidance documents.

Garbage (Household Waste) – Type of debris that is waste generated during non-disaster situations and regularly picked up through normal municipal waste collection methods. Common examples of garbage include food, packaging, plastics, and papers. This type of debris is not eligible for debris management activities.

Forecast Methods

After the disaster parameters and geographic extent are established, specific debris volumes can be quantified by using historical information available through Wyandotte County Emergency Management, the National Weather Service, or by using forecasting models. If historical data is not available or insufficient, quantitative and qualitative forecasting models can be used to supplement debris volume quantification.

Qualitative Forecasting

Qualitative forecasting will consist of "windshield tours" and "pass through" of the impacted portions of Wyandotte County. The Cities may use this same method with assistance from the DPM. These actions will note the location, vegetative cover, and estimated percentage of area impacted. These estimates will be the basis for the overall debris forecast.

Quantitative Forecasting

The information gathered as part of the qualitative forecasting will be reported to Wyandotte County's Geographic Information System (GIS) department, which will establish the number of habitable structures in the review area as well as land-use of

the noted properties. Based on this information, the following estimations can be applied.

Buildings – Several basic techniques have been established to forecast destroyed building debris quantities. These techniques can be used to forecast debris quantities prior to an event or estimate quantities after an event.

Residential Buildings – A formula for estimating the debris quantities from a demolished single-family home and associated debris is as follows:

L x W x S x 0.20 x VCM = ____ cubic yards of debris (cy)

- L = Length of the building in feet
- W = Width of the building in feet
- S = Height of building in stories
- VCM = Vegetative Cover Multiplier. Always use medium (1.3) in Wyandotte County.

The VCM is a measure of the amount of debris within a subdivision or neighborhood. The descriptions and multipliers are described as:

- Light (1.1 multiplier) includes new home developments where more ground is visible than trees. These areas will have a sparse canopy cover.
- Medium (1.3 multiplier) generally has a uniform pattern of open space and tree canopy cover. This is the most common description for vegetative cover, and is used in the State of Kansas.
- Heavy (1.5 multiplier) is found in mature neighborhoods and woodlots where the ground or houses cannot be seen due to the tree canopy cover.

The table below can be used to forecast debris quantities for totally destroyed single-family, single-story homes in the applicable vegetative cover category.

Typical House Size	Vegetative Cover Multiplier (cy)			
	None	Light (1.1)	Medium (1.3)	Heavy (1.5)
1000 ft^2	220	220	260	300
1200 ft^2	240	264	312	360
1400 ft^2	280	308	364	420
1600 ft^2	320	352	416	480
1800 ft^2	360	396	468	540
2000 ft^2	400	440	520	600
2200 ft^2	440	484	572	660
2400 ft^2	480	528	624	720
2600 ft^2	520	572	676	780

The amount of personal property within an average single-family home has been found to be:

- 25-40 cy for homes without a basement
- 45-50 cy for homes with a basement

Mobile homes have less utilized space due to their construction and use. The walls are narrower, and the units contain more storage space. Therefore, the typical mobile home generates more debris by volume than a single-family home. Historically, the volume of debris from mobile homes can be found to be:

- 290 cy of debris for a single-wide mobile home
- 415 cy of debris for a double-wide mobile home

Outbuildings – All other building volumes may be calculated by using the following formulas:

(L x W x H x .33)/27 = cubic yards of debris

- L = Length of the building in feet
- W = Width of the building in feet
- H = Height of the building in feet
- 0.33 is a constant to account for the "air space" in the building
- "27" is the conversion factor from cubic feet to cubic yards

Vegetation – This type of debris is the most difficult to estimate due to the random sizes and shapes of trees and shrubbery. The following serves as a guide for forecasting and estimating vegetative debris:

- Each home is estimated to have an associated 3.65 cubic yards of this type of debris
- Treat debris piles as cubes, not a cone (when estimating)
- 15 trees, 8 inches in diameter = 40 cy (average)
- One acre of debris, 3.33 yards high = 16,117 cy

The following factors will be used to convert woody debris from cubic yards to tons:

- Softwoods: 6 cubic yards = 1 ton
- Hardwoods: 4 cubic yards = 1 ton
- Mixed Debris: 4 cubic yards = 1 ton
- Construction & Demolition: 2 cubic yards = 1 ton

Several truckloads may need to be tested to confirm these factors during actual debris management activities.

IV. Debris Collection

Eligible Debris

Eligible debris removal work must meet the following criteria:

- The debris was generated by a major disaster event;
- The debris is located within a designated disaster area;
- Federal assistance is available with debris removal on Federal aided Roadways;
- The debris is located on Wyandotte County's improved property or rights-of-way (a rule of thumb would be 10 feet of R.O.W); and
- The debris removal is the legal responsibility of Wyandotte County.

Ineligible Debris

The following are not eligible for debris removal work:

- Any debris removed from Wyandotte County's unimproved property or undeveloped land;
- Any debris removed from a facility that is not eligible for funding under the Public Assistance Program (ex: private owned cemeteries and golf courses); and
- Any debris removed from Federal lands or facilities that are under the direct authority of that Federal agency or department (i.e. the Social Security Administration building).

Response Operations

Wyandotte County will use its own labor force and equipment to remove debris during this phase. In circumstances when the existing labor force is not sufficient, or when specialized services are required, Wyandotte County may supplement its work efforts by activating local or regional mutual aid agreements and/or by awarding short-term debris removal contracts for specific work.

Priorities

Response operations will primarily focus on the emergency access routes and main arterials within Wyandotte County. Based on the incident, planning staff members will identify which roads and streets are essential to emergency operations so local resources can be optimally managed and directed. The Emergency Snow Routes would be a good starting point within the cities with such designated routes.

Prior to, and immediately following the event, extricating people and providing access to health care facilities are the top priorities. Therefore, the major arterial routes are given priority for the emergency services staff such as police, fire, and ambulance services.

Overall priority to roadways will be determined by the event; however, specific considerations are as follows:

- Fire, police, and ambulance service route access to affected areas
- Access routes to health care facilities, functional and access needs facilities, and other critical care facilities
- Major arterial routes
- Roads and streets to the debris management center and emergency operations center
- Supply routes to emergency supply distribution centers, or points of dispensing (POD)
- Roads and streets to key government facilities, court houses, jails, etc.
- Communication towers and systems access
- Utility access routes
- Routes to shelters

Recovery Operations

These activities begin after the emergency access routes are cleared and the residents return to their homes and begin to bring debris to the public rights-of-way.

The implementation of disaster debris collection immediately after the disaster event assures the community there will be a swift return to normalcy and that recovery efforts are in progress. The two main methods of debris collection are curbside collection and collection centers.

Curbside Collection – This type of collection parallels the County's normal garbage and trash collection operations. Wyandotte County provides garbage collection service in the City of Kansas City and the unincorporated portions of the County. The cities of Edwardsville and Bonner Springs contract for their own garbage collection services. Debris is placed at the curb or public rights-of-way by the residents and collected by standard methods. Should the volume of debris exceed the abilities of the contractors to clear it in a timely fashion, Wyandotte County Public Works will augment those collection services.

Mixed Debris Collection

This method allows all debris types to be collected in one specified area, usually along the public rights-of-way or in front of individual residences. This method is convenient for the public, but does not facilitate effective recycling and reduction efforts as debris will need to be handled multiple times. *Therefore, Source-Segregated Debris Collection should be used in Wyandotte County whenever practical and cost effective.*

Source-Segregated Debris Collection

This method requires residents to sort the debris by material type and place it at the curb in separate piles. Trucks designated for a particular

debris type collect the assigned debris and deliver it to a temporary staging area, or debris management site, reduction, recycling, or disposal facility. This method requires more trucks to collect the different types of debris. However, the increased equipment cost is offset by avoiding the labor cost and time to separate the debris by force-account labor (as per mixed debris collection). This method offers the potential of high salvage value and efficient recycling/reduction processing.

Collection Centers

This type of collection method directs residents to transport their debris to a common location in the county where roll-off bins or dumpsters are located. Another method could be that residents would place the debris in piles in specific areas and those piles would then be loaded into trucks for transport to the final disposal site. Associated costs are generally low since the public essentially accomplishes the material collection and separation themselves; however, site monitoring is required to ensure debris cross-contamination does not occur.

Although potentially effective, collection centers near debris management sites may inadvertently create a safety risk to debris management workers and the community-at-large. Therefore, collection centers could be established after initial curbside collection is completed to ensure the removal of remaining debris within the community and ensure the safety of the general public.

Collecting Hazardous / Electronic Waste and White Goods

The three most common types of debris that will need special handling are hazardous waste, white goods, and electronic waste.

Household Hazardous Waste (HHW)

HHW mixed with other debris types will contaminate the entire load, which necessitates special disposal methods such as storage in a particular area of the debris management site. Typically the landfill requires special liners and a more intense permit standard due to the hazardous waste. The disposal cost of HHW is generally higher than the disposal of other waste, which leads to escalating costs if this type of debris is not managed efficiently.

This type of debris is mitigated through Wyandotte County's Household Hazardous Waste Collection Program, which includes seven yearly collection events for the public throughout the county. During a disaster, Wyandotte County Public Works Department will coordinate the curbside pickup and segregation of these materials at a temporary debris management site until final disposition can be arranged.

White Goods

White goods include all appliances and household machines that contain refrigerants and other fluids that are regulated by the Kansas Department of Health and Environment and can only be reclaimed by certified technicians and

disposed of at a permitted facility. To avoid accidental release of these hazardous fluids, the collection of white goods will be accomplished by manually placing the appliance on trucks or by using lifting equipment that will not damage the elements which contain the hazardous fluids. These materials will be collected curbside, then taken to a temporary debris management site until final disposition can be arranged.

Electronic Waste (E-waste)

E-waste consists of any broken or damaged piece of electronic equipment. Categories include communications equipment, computer equipment, television and video equipment, electronic tools, lighting, medical equipment, etc. During a disaster these materials will be collected curbside and taken to a temporary debris management site until final disposition can be arranged per normal county procedures.

Putrescent Waste Removal

Putrescent materials such as dead animals will not be shipped to county temporary landfill operations. The Kansas Department of Agriculture will be contacted to determine the most effective method of disposal. If on-site burial is considered, Wyandotte County Planning and Zoning, U.S. Department of Agriculture, Kansas Department of Health and Environment, and Kansas Wildlife and Parks would need to be consulted before taking such actions.

Recycling of Debris

Volume Reduction by Recycling

Recycling reduces recovered debris volume before it is hauled to a landfill or other final disposition location. Recycling is the preferable option for Wyandotte County, because there may be economic value to the recovered material, and it is environmentally responsible. Metal, wood, and soil are prime candidates for recycling operations, with the major drawback being the potential for negative environmental impact. For example, in areas where there is significant usage of chemical agricultural fertilizer, the recovered soil may be too contaminated for residential or agricultural reuse.

Tornadoes may present opportunities to contract out large-scale recycling operations and to achieve an economic return from some of the contractors who exercise their initiative to segregate and recycle debris at the debris management sites. Recycling has significant drawbacks if contracts are not properly written and closely monitored.

Specialized contractors should be available to bid on disposal of debris by recycling, if it is well sorted. Contracts and monitoring procedures should be developed to ensure the recyclers comply with local, tribal, State, and Federal environmental regulations.

Recycling should be considered early in the debris removal and disposal operation, as it may present an opportunity to reduce the overall cost of the operation. The following materials are suitable for recycling:

- **Metals.** Tornadoes and wind storms may cause extensive damage to mobile homes, sun porches, barns, and out buildings. Most of the metals are non-ferrous (aluminum, brass, copper, nickel, tin, lead, and zinc) and suitable for recycling. Ferrous metals (mild steel, carbon steel, stainless steel, cast iron, and wrought iron) can be separated using an electromagnet. Both types of metals are suitable for recycling, and can be sold to metal recycling firms.

- **Soil.** Cleanup operations, using large pieces of equipment can potentially pick up large amounts of soil. If the amount of soil is significant it is more expensive to transport and pay tipping fees at local landfills than to sort out the heavy dirt before moving the material. Large amounts of soil can be recovered if the material is put through some type of screen or shaker system. This procedure can produce significant amounts of soil that can either be sold or recycled back into the agricultural community. The separated soil can also be transported to the staging and reduction sites where it is combined with other organic materials that will decompose over time, or this soil could be used at local landfills for cover. Monitoring and testing the soil may be necessary to ensure it is not contaminated with chemicals.

- **Wood.** Woody debris can be either ground or chipped into mulch by the County or a contractor. The reduced debris can either be given to citizens or taken by the contractor for disposal at their discretion.

- **Construction Material.** Concrete block and other building materials can be ground and used for other purposes if there is a ready market. Wood construction materials, like vegetation, can also be shred/ground to reduce volume. This construction material could also be used at local landfills for cover. Wyandotte County does not have such a resource for grinding of concrete, therefore we would be forced to contract this out, which may or may not be feasible in a cost-benefit ratio.

- **Residue Material.** Residue material that cannot be recycled, such as cloth, rugs, and trash, can be sent to a landfill for final disposal.

- **Household Hazardous Waste.** Many household hazardous waste products can be reused for many applications rather than entering the product into the waste stream. Wyandotte County has a regular HHW collection program overseen by the Kansas Department of Health and Environment.

- **White Goods.** White goods such as washers, dryers, refrigerators, and freezers can be recycled for their salvage value. Wyandotte County has a contract with Waste Management to pick up these goods during normal operations, and this would continue for a disaster event.

- **Vehicles.** Motor vehicles (trucks, cars, motor homes, tractors, etc.) which become debris would be hauled to a staging area utilizing Wyandotte County's standard wrecker rotation procedure. Status of abandoned vehicles at the debris site will determine if they are processed for recycling or are salvageable**.**

- **Electronic Waste.** As discussed earlier in this plan, e-waste is recyclable and will be segregated at a debris site. The County contracts with an e-waste vendor for recycling and will continue to use the current contractor to carry out e-waste collection and recycling. E-waste may be taken to a drop off location determined during the incident or, if deemed necessary, will be placed in a temporary location.

V. Debris Management Sites

Depending on the type of disaster debris and scale of the event, Wyandotte County may use one or more temporary debris management sites (DMS) as needed. The DMS location would temporarily store, reduce, segregate, and/or process debris before it is hauled to its final disposition. The County will prioritize site locations based on safety, resources, transportation access, and practicality of location. The priority in terms of general types of locations will be as follows: public paved property, private paved property, public unpaved property, and private unpaved property. A list of potential temporary DMS is included in Attachment J.

The temporary DMS review ensured the following:

- Does not exist in an environmentally or historically sensitive area, such as critical animal and plant habitats, sole source aquifers, freshwater well fields, historic districts, or archeological sites.
- Does not exist in a Superfund site, or area within a 100-year floodplain.
- Takes into consideration any disproportionately high or adverse impacts on minority or low-income populations.

Environmental Requirements

A baseline environmental collection study will also be conducted prior to a DMS establishment. This baseline data is essential in assuring the land is returned to its original condition following the end of all debris management operations. The following methods may be used to document new or updated baseline data:

- *Videotape and/or Photograph the Site* – Thoroughly videotape and/or photograph (ground or aerial) each site before beginning any activities.

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

- *Investigation of the Historical Significance* – Research the past use and ownership of the property to document any issues regarding the existence of historic structures or archeological sites.

- *Sample Soil and Water* – Soil and groundwater samples will be collected prior to use of the site. Planned HHW, ash, and fuel storage areas will also be sampled prior to site setup.

As operations proceed, additional data will be collected throughout the operation for closeout and quality assurance reasons. The data can be compared to the previously established information in order to determine any remediation that may be necessary. The following tools can be utilized:

- Sketch Site Operation Layout – DMS operations may grow, shrink, or shift on the site. It is important to track reduction, hazardous waste collection, fuel, and equipment storage in order to sample soil and water for contaminants.

- Document Quality Assurance Issues – Document operations that will have a bearing on site closeout, such as petroleum spills at fueling sites, hydraulic fluid spills at equipment breakdowns, installation of water wells for stock pile cooling or dust control, discovery of HHW, and commercial, agricultural, or industrial hazardous and toxic waste storage and disposal.

- Restoration of Site – Final restoration of the landscape must be acceptable to the landowner, but within reasonable expectations. Therefore, the restoration of the landscape will be planned for as early as possible during debris management operations.

Wyandotte County's objective with regards to the potential environmental impact at all sites is to ensure safety precautions are taken to organize the site in such a way as to provide a safe and organized use of the location throughout the event, and that measures are taken to reduce the chance of ground, air, and water contamination after all debris materials have been collected. This objective may be accomplished in a variety of ways and will be the responsibility of the Wyandotte County Health Department with assistance from Public Works.

Permits

Environmental permits and land-use variances may be required to establish a temporary DMS. Several agencies may be involved in issuing permits and granting land-use approvals. The need for these permits may be satisfied by changes established in a declared disaster in Wyandotte County; however, a listing of permits that may be necessary include the following:

- Waste processing and recycling operations permit
- Temporary land-use permits
- Land-use variances
- Traffic circulation strategies
- Air quality permits
- Water quality permits
- HHW permits
- Fire department burn permits
- Historic Preservation Review

Agencies involved in issuing permits and granting land-use approvals include, but is not limited to, the following:

- Wyandotte County Health Department
- Wyandotte County Planning and Zoning
- Wyandotte County Legal Department
- Kansas Department of Health and Environment (www.kdheks.gov)
    - Bureau of Waste Management (www.kdheks.gov/waste)
- Kansas Department of Agriculture (http://agriculture.ks.gov)
- Kansas State Historic Preservation Office (www.kshs.org)

Site Design and Preparation

The topography and soil/substrate conditions will be evaluated to determine the best site layout. When planning site preparation, the designer will consider ways to make site closure and restoration easier. For example, if the soil is very thin, the topsoil can be scraped to bedrock and stockpiled in perimeter berms. Upon site closeout, the uncontaminated soil can be re-spread to preserve the integrity of the tillable soils.

Operational Boundaries

These boundaries, or areas, clearly define the difference in use areas at the DMS. Earthen berms, temporary barriers, or any other physical restriction may be used to aid in traffic circulation and the minimization of amassing debris at the DMS. Common operational areas include the following:

- Reduction
- Recycling
- Tipping areas (unloading). Only contractors currently contracted with the County and County residents will be allowed to utilize these sites.
- Loading areas for processed debris awaiting final disposition
- Drop-off centers for the general public (this may include vegetative, recycling, or construction and demolition debris)
- HHW drop off
- Monitoring tower locations at both ingress and egress points
- Equipment, fuel, and water storage

The reduction, recycling, tipping, and loading areas need ample room for large equipment operations. Depending on the scale of the operations, each debris stream may, and should, have its own tipping area and will be designed accordingly.

General public drop-off areas for recycling, reduction, and construction and demolition debris may be included within the DMS, but will be carefully designed for passenger vehicle traffic and public safety. The HHW storage will be close to the public drop-off center, yet restricted so that qualified personnel may process the waste appropriately.

Monitoring towers will be located at ingress and egress points and will be constructed of durable structural materials. The structures will be designed to withstand active and static loads. A stepladder is not an acceptable monitoring tool.

Equipment and fuel will have a designated storage area and signs posted appropriately. The fuel storage areas need to be designed to contain spills. Every effort will be made to have water readily available at all times. Water storage areas will be strategically positioned throughout the site and identified appropriately. Water Storage may come as a tender truck from a fire department or the local entity overseeing the DMS. Attachment C contains a sample DMS layout with operational boundaries.

Traffic Patterns

The traffic circulation needs to be well defined throughout the entire site. Although traffic signs and barricades aid in directing traffic, flag directors and law enforcement personnel may need to be on site to direct traffic.

Site Management

The management of the DMS will be under the control of Wyandotte County Public Works personnel to ensure operational efficiency and to meet strategic goals.

Site Manager

This position is responsible for supervising the overall day-to-day operations, maintaining daily logs, preparing site progress reports, and enforcing safety and permit requirements during site operations. Furthermore, the site manager has oversight for monitoring the activities of the debris removal contractors and onsite debris processing contractors to ensure they comply with the terms of their contracts. The site manager is also responsible for site security and traffic control. These functions can be delegated to assigned personnel if appropriate and available.

Debris Monitors

Operational monitors will be placed at ingress and egress points in order to quantify debris loads, issue load tickets, inspect and validate truck capacities, check loads for hazardous waste, and perform quality control checks.

Safety Personnel

Safety personnel are responsible for traffic control and ensuring site operations are in compliance with Federal and State occupational safety regulations.

Monitoring Debris Removal

The purpose of monitoring debris removal is to (1) verify the work completed by the contractor is within the scope of work of the contract, and (2) ensure documentation is provided to confirm operations have meet all local, State, and Federal laws, regulations, and guidelines.

Debris Monitoring Duties

To do this, debris monitors will minimally perform the following roles:

- Measure and certify truck capacities (recertify on a regular basis);
- Complete and physically control load tickets (in monitoring towers and the field);
- Validate hazardous trees, including hangers, leaners, and stumps (use appropriate documentation forms);
- Ensure trucks are accurately credited for their loads;
- Ensure trucks are not artificially loaded to maximize reimbursement (i.e., debris is wetted, debris is not compacted, etc.);
- Ensure hazardous waste is not mixed with loads;
- Ensure all debris is removed from trucks at the DMS;
- Report to project manager:
    - Mobilization and use of improper equipment
    - Contractor personnel safety standards are not followed
    - General public safety standards are not followed
    - Completion schedules are not on target
    - Debris removal work does not comply with all local, State, and Federal ordinances and regulations
- Ensure only debris specified in the scope of work is collected, and identify work as potentially eligible or ineligible;
- Monitor site development and restoration of DMS;
- Ensure daily loads meet permit requirements;
- Ensure work stops immediately in an area where human remains or potential archeological deposits are discovered;
- Ensure the route to the DMS is free of debris that may have fallen off trucks while hauling to the site. There might be a need for a clean-up crew that follows the route on an hourly basis picking up fallen debris.

Debris Monitoring Methods

Additional documentation requirements depend on how the debris is collected and processed. The following methods and systems may be used to monitor and document the work completed by Wyandotte County resources and/or by contractors.

Debris Monitoring Reports – This type of report is important for time-and-materials contracts that may be used during the response phase of the operations. Monitoring documentation for time-and-materials contracts includes:

- Actual labor hours worked
- Actual equipment hours operated
- Type and specification of equipment used

Truck Certification Form – This type of report allows the monitor to identify the truck itself and its hauling capacity in a standardized manner. The standard list of requirements includes:

- Size of hauling bed in cubic yards
- License plate number
- Truck identification number assigned by the owner
- Short physical description of the truck

Recertification of the hauling trucks on a random and periodic basis will be implemented for contract compliance and reimbursement considerations. Attachment K contains a sample truck certification form.

Load Ticket System – The term "load ticket" refers to the primary debris-tracking document. A load ticket system tracks the debris from the original collection point to the DMS or landfill. By positioning debris monitors at each point of the operations (collection, DMS, and/or final disposition), the eligible scope of work can be properly documented.

Each monitor keeps a copy of the load ticket and the driver/contractor keeps two copies for billing purposes. Attachment I includes a copy of the load ticket that will be used by Wyandotte County personnel during debris management activities.

The following is the disposition of each load ticket part.

- Part 1 (White) – Site or Origin Representative
- Part 2 (Green) – Disposal Site Monitor
- Part 3 (Canary) – Debris Site Representative
- Part 4 (Pink) – Driver or Contractor
- Part 5 (Gold) – Driver or Contractor

Monitoring Tips

Contractors must always be monitored closely to ensure compliance with the scope of work. Attachment L includes monitoring tips that address common types of contractor abuse.

Methods of Material Reduction

There are three main types of reduction methods to consider and use during debris management operations: incineration, chipping/grinding, and recycling. The type(s) used will be based on operational goals, site availability, and personnel availability.

Incineration – Burning vegetative debris is a very common reduction method because it has up to a 95% reduction rate. The incineration process requires a minimum of three steps, to include:

- Unloading the debris

- Moving the debris into an incinerator
- Removing the ash from the incinerator to final disposition, which may be an appropriately constructed area at the DMS or a landfill

There are several incineration methods available for volume reduction.

Uncontrolled Open-Air Incineration – This method reduces debris with no control over how much or how quickly it is allowed to burn. The use of this type of reduction will be limited to early in the disaster due to its lack of environmental control.

Controlled Open-Air Incineration – This method reduces vegetative debris by burning debris within a contained area. This reduction can be used freely because it presents little environmental damage and is cost-effective.

Air Curtain Pit Incineration – This method effectively expedites the volume reduction process while substantially reducing the environmental concerns caused by open-air incineration. Specifically, this type of reduction uses a pit constructed by digging below grade or building above grade and using a blower unit. The burning chamber is usually no more than 8 feet wide and 9-14 feet deep.

Portable Air Curtain Incinerators – This method uses the same concept as air curtain pit incineration, except this method utilizes pre-manufactured pits rather than onsite constructed earthen pits. These types of incinerators are the most efficient because they have been pre-engineered to precise dimensions to complement the blower system.

Setbacks and buffer zones need to be established within and around the reduction sites not only for public safety, but also for the safety of debris operations. A setback of at least 100 feet will be maintained between the debris piles and the incineration area. Additionally, a 1,000 foot buffer zone will be established between the incineration area and the nearest building to create room for emergency vehicles to maneuver. All burning operations are subject to environmental regulations set forth in K.A.R. 28-19-647(d.-e.).

Chipping/Grinding – This method calls for the vegetative debris to be chipped or ground. This method can reduce volume by 75%. Because of the remaining volume, the benefit of this reduction method is increased by identifying alternate uses of residual material such as recycled wood chips used for agricultural purposes, or as fuel for industrial heating. Plastics will be eliminated completely from debris prior to performing this method.

Recycling – This method captures pre-identified types of debris materials for recycling and/or reuse. Currently, within Wyandotte County the capability to recycle metals such as aluminum, tin, and various other scrap metals exists. Community recycling centers are currently available in Wyandotte County for residential-type recycling, e-waste, white goods, and household hazardous

waste. Wyandotte County does not have a construction and demolition debris recycling program.

Site Closure

When site operations are complete, the property must be restored to its original condition before returning the site to the property owner. This restoration includes the removal of all traces of operations and possible remediation of any contamination that may have taken place during the operations. The site, whether owned or leased by Wyandotte County, must be brought back to its previous environmental state, prior to it being returned to the owner.

The final environmental site evaluation is an extension of the environmental monitoring program. Similar testing, as completed in the baseline study, will be conducted to confirm the site has been returned to its pre-activity state. Test samples will be taken at the same locations as those of the initial assessment and monitoring program. Based on the results of the testing, additional remediation may be required.

All operational documentation will be collected and organized, then submitted to Wyandotte County Emergency Management for review. If needed, these documents will be incorporated into disaster reimbursement requests per pre-determined processes established by county policy.

VI. Contracted Services

It may be necessary to contract for debris removal services if the magnitude of the disaster is beyond the capabilities of Wyandotte County, mutual aid agreements, and volunteer labor.

FEMA reimburses costs incurred using three types of contract payment obligations: fixed-price, cost-reimbursement, and, to a limited extent, time and materials (T&M). The specific contract types related to each of these are described in FEMA's Procurement Guidance for Recipients and Sub-recipients under 2 C.F.R. Part 200 (Uniform Rules).

The Applicant must include required provisions in all contracts awarded and maintain oversight to ensure contractors perform according to the conditions and specifications of the contract and any purchase orders. FEMA does not reimburse costs incurred under a cost plus a percentage of cost contract or a contract with a percentage of construction cost method.

FEMA advises against the use of T&M contracts and generally limits the use of these contracts to a reasonable time based on the circumstances during which the Applicant could not define a clear scope of work (SOW). T&M contracts do not provide incentives to the contractor for cost control or labor efficiency. Therefore, FEMA may reimburse costs incurred under a T&M contract only if all of the following apply:

- No other contract was suitable;
- The contract has a ceiling price that the contractor exceeds at its own risk; and

- The Applicant provides a high degree of oversight to obtain reasonable assurance that the contractor is using efficient methods and effective cost controls.

The Applicant should define the SOW as soon as possible to enable procurement of a more acceptable type of contract.

Emergency Contracting & Procurement Procedures

Type of Contract

Wyandotte County will use pre-event unit-price contracts awarded in non-disaster times. Contractors will be paid based on the number of cubic yards of eligible debris hauled per truckload to the temporary debris management site(s).

If additional contracted labor is needed during debris management operations, additional contracts may need to be instituted. The following list of contract types may be instituted per Wyandotte County procurement policies.

Lump Sum – Work within a prescribed boundary with a clearly defined scope (including finite timeframe) and a total price. There are two common uses of the lump sum contract which are as follows:

Area Method – This technique defines the geographical boundary in which the debris is to be collected. By providing geographical boundaries, the quantity of debris may be forecasted or estimated based on topography and land use.

Pass Method – This technique describes the number of times debris will be collected from the curbside within a specified geographical boundary. Limiting the number of passes for an area keeps the scope of work known.

The advantage of a lump sum contract is that the total price for the specified work is known at the time the bids are opened. Attachment E summarizes the lump sum structure, provisions, advantages, disadvantages, monitoring, and documentation.

Unit Price – Work done on an item-by-item basis with cost determined per unit. The quantities of work to be completed are estimated by Wyandotte County and included in the bid solicitation process. The estimated quantity of work described in the bid solicitation can be adjusted to reflect a more accurate quantity when debris operations are under way and the true extend of the disaster is realized. Attachment D summarizes the unit price structure, provisions, advantages, disadvantages, monitoring, and documentation.

Time and Materials – Contractor bills Wyandotte County for labor, equipment, materials, and overhead. This type of contract is used when the scope of work necessary to achieve an outcome is unknown.

Moreover, this type of contract establishes hourly rates for labor and equipment that will be used to perform specific tasks. Solicitation for a time and materials contract will include descriptions of the types of work items that would be required for debris removal, debris processing, and recycling.

Wyandotte County will establish the maximum number of hours this type of contract can work or set a ceiling of no more than a set number of hours of actual work. Wyandotte County will carefully monitor these contracts by requiring contractors to provide daily work reports and other control measures as deemed necessary.

This type of contract is the least preferred and is typically only used for initial emergency work or when there are complex life-saving activities dependent on the removal of debris. Attachment F summarizes the time and materials structure, provisions, advantages, disadvantages, monitoring, and documentation.

General Contract Provisions

To protect the interests of Wyandotte County, specific items will be included in the contract to minimize potential conflicts with the contractor. These items include the following:

- *Basis of payment* – Basis of payment is usually based on the volume and/or weight of the contractor's loads.

- *Duration of the contract* – To ensure debris removal is conducted expeditiously; the contract will include specific timelines for work to be completed.

- *Performance measures* – Wyandotte County will implement progress payments for services as specific performance tasks have been meet and documented.

- *Agreement to restore collateral damage* – A contract provision will include a requirement that the contractor is to restore and/or repair (at the contractor's cost) all damaged infrastructure back to pre-existing conditions if the damage was caused by their activities.

- *Termination for convenience* -- This clause allows Wyandotte County the ability to terminate the contract if the contractor does not deliver services in the manner delineated in the contract.

- *Conflict resolution process* – This contract provision will include alternatives for mediation should an issue prove difficult to solve.

- *Standard Unified Government Provisions* – Certain mandatory Wyandotte County Contract provisions will be attached as a separate exhibit to the agreement.

Contract Scope of Work

Will reference one of the following:

- o Eligible Work
- o Work eligible under FEMA Public Assistance regulations, policies, and guidance
- o Work performed on public property and/or public rights-of-way

Units of work must be viewed uniformly to prevent work on one piece of debris on multiple occasions (ex: removing a leaning portion and then cutting the stump to the ground cannot be two separate unit costs).

Contract Limitations & Misconceptions

- Avoid "piggyback contracts" with neighboring jurisdictions
- Use caution with shared contracts
- Cost-plus-percentage-of-cost contracts will not be used
- Avoid contracts with any phrase that implies, insinuates, or otherwise uses phrases that indicate FEMA pre-approval

Procurement Policy

Wyandotte County jurisdictions will follow the Board of County's Commissioners Resolution for all emergency procurement rules, regulations, limitations, and exceptions.

Additional Contract Requirements

- All contracts in excess of $10,000 must contain a provision for termination for cause and for convenience by Wyandotte County.
- For contracts over $100,000, the following minimum bonding requirements will apply:
  - o A bid guarantee from each bidder equivalent to 5% of the bid price
  - o A performance bond on the part of the contractor for 100% of the contract price
  - o A payment bond on the part of the contractor for 100% of the contract price

VII. Private Property Demolition and Debris Removal

As stated elsewhere in this plan, it is the intention of Wyandotte County to collect debris located and/or placed in curbside rights-of-way. County staff, contractors, or other representatives will not enter onto private property to collect such debris. In the event that damage is not abated and/or debris is not removed and such conditions are deemed to constitute a dangerous, health or nuisance condition, necessary authority will be provided by the Wyandotte County Board of Commissioners.

If deemed appropriate due to the scope of the disaster and/or debris generated by such a disaster, the County Board of Commissioners along with City Officials may take additional formal executive action to authorize collection of debris on private property provided such authorization ensures that the applicable property owner(s) execute a waiver or release of liability developed by Wyandotte County in coordination with FEMA or other applicable State & Federal agencies.

Prior to any removal of debris from private property, the following documentation will be sent to FEMA's Federal Coordinating Officer (FCO):

- Documentation confirming the existence of an immediate threat on public property (44 CFR 206.224(a));
    - Immediate threat to life, public health, and/or safety
    - Immediate threat to improved property determination
    - Removal will expedite economic recovery of Wyandotte County
- Documentation of the legal authority to enter that property (44 CFR 206.224(b);
- Documentation that a legally authorized official has ordered the exercise of public authority to enter private property to perform debris removal (44 CFR 206.223(a)(3); and
- Indemnification for the Federal government and its employees, agents, and contractors from any claims arising from the removal of debris (44 CFR 206.9).

The FCO will approve or disapprove, in writing, Wyandotte County's request. If approval is granted, debris removal can begin with the pre-determined scope of work; however the following documents will be created during debris management operations:

- *Right-of-Entry* – This document must be signed by the property owner and will include a hold harmless agreement and indemnification applicable to the project's scope of work.

- *Physical Documentation* – Photos will be taken to show the condition of the property prior to the beginning of the work. Pictures will document the address and scope-of-work on the private property.

- *Private Property Debris Removal (PPDR) Assessment* – A property specific assessment will be created to establish the scope of eligible work. The PPDR can be a map or other documentation system that serves as a guide indicating the location of the eligible items of work that present an immediate threat relative to the improved property or rights-of-way.

- *Documentation of Environmental and Historic Review* – Documents environmental and historical preservation compliance as established in 44 CFR Parts 9 and 10 as well as any relevant Kansas or Wyandotte County resolution, Statute, or ordinance.

Additional documentation may be required by the FCO on a case-by-case basis to demonstrate the proposed work is in compliance with all Federal, State, and local laws and regulations.

VIII. Public Information Plan

Distribution Strategy

Public information related to debris management will be submitted to the public by all methods available. Although there will be an operational public information officer designated by the Debris Project Manager, this position will work in cooperation with the Wyandotte County Public Information Officer to facilitate the distribution of public information. The following communication vehicles will be considered when performing this function:

- Mass Media – This includes local television, radio, newspapers, Social Media, or community newsletters that reach the impacted area(s).
- Internet Sites – Information will be posted to the Unified Government of Wyandotte County webpage (www.wycokck.org)
- Public forums – This includes interactive meetings at a local government building(s).
- Direct Delivery Products – This includes door hangers, direct mail, fact sheets, flyers within bills, billboards, etc.

Using these various communication methods will ensure the distribution of information even if power, utilities, and other infrastructure have been damaged during the disaster. Providing this information to the workers in the field is also a critical way to distribute vital information.

The Public Information Officer may choose to establish a Debris Information Hub if the size of the debris management process warrants it. This may include a direct Wyandotte County hotline or information may be routinely submitted to the regional 2-1-1 system or the local 3-1-1 system.

Through the listed mechanisms, the public will be encouraged to do the following (see Attachment N for a curbside example):

- Separate debris materials – burnable materials, non-burnable materials, household hazardous waste (HHW), and recyclable materials;
- Place separated materials at local curbside;
- Keep debris materials from fire hydrants;
- Report illegal debris material dump sites; and
- Review all debris removal routes and schedules

IX. Plan Maintenance

As a support addendum to the Wyandotte County Emergency Operations Plan, this Plan will be reviewed on an annual basis for necessary changes or additions in order to maintain operational and legal requirements.

X. Acronyms

DMS	Debris Management Site
DPM	Debris Project Manager
FCO	Federal Coordinating Officer
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
HHW	Household Hazardous Waste
KDEM	Kansas Department of Emergency Management
KDHE	Kansas Department of Health and Environment
NRCS	National Resources Conservation Service
TDMS	Temporary Debris Management Site
USACE	United States Army Corp of Engineers
USDA	United States Department of Agriculture
VCM	Vegetative Cover Multiplier
WMD	Weapon of Mass Destruction

XI. Definitions

Disaster-generated debris: Any material, including trees, branches, personal property, and building material on public or private property that is directly deposited by the disaster.

Improved property: Any structure, facility, or equipment that was built, constructed, or manufactured. Examples include houses, sheds, car ports, pools, and gazebos. Land used for agricultural purposes is not improved property.
Private property: Land and structures, to include contents within the structures, built on land that is owned by non-governmental entities.

Private road: Any non-public road for which a subdivision of the State is not legally responsible to maintain. Private roads include roads owned and maintained by homeowners associations, including gated communities, and roads for which no entity has claimed responsibility. Local police, fire, and emergency medical entities may use these roads to provide services to the community.

Root Ball: The tightly packed mass of roots and soil produced by a plant.

XII. Attachments

Attachment A: Hazardous Stump Worksheet
Attachment B: Stump Conversion Table
Attachment C: Sample DMS Layout with Operational Boundaries
Attachment D: Unit Price Contract Summary Matrix
Attachment E: Lump Sum Contract Summary Matrix
Attachment F: Time and Materials Contract Summary Matrix
Attachment G: Operational Safety Awareness & Regulations
Attachment H: Federal Guide Load Ticket
Attachment I: Sample Debris Load Ticket
Attachment J: Debris Management Sites and Available Landfills
Attachment K: Truck Certification Form
Attachment L: Debris Monitoring Tips
Attachment M: List of Preferred Vendors
Attachment N: Debris Notification Sheet
Attachment O: Right of Entry
Attachment P: Debris site check off

ATTACHMENT A: Hazardous Stump Worksheet

Hazardous Stump Worksheet

Applicant: _____ Date: _____

Applicant Representative: _____ Signature: _____

FEMA Representative (if available) _____ Signature: _____

State Representative (if available): _____ Signature: _____

	Physical Location (i.e., Street address, road, cross streets, etc.)	Description of Facility (ROW, Park, City Hall, etc.)	Hazard		GPS (decimal degrees, 00.000000)		Tree Size (Diameter)	Eligible		Fill For Debris Stumps	Comments (See attached sketch, photo, etc.)
			Yes	No	Latitude (N)	Longitude (W)		Yes	No	CY	
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

ATTACHMENT B: Stump Conversation Table

Stump Conversion Table

Diameter to Volume Capacity

The quantification of the cubic yards of debris for each size of stump in the following table was derived from FEMA field studies conducted throughout the State of Florida during the debris removal operations following Hurricanes Charley, Frances, Ivan and Jeanne. The following formula is used to derive cubic yards:

$$\frac{[(\text{Stump Diameter}^2 \times 0.7854) \times \text{Stump Length}] + [(\text{Root Ball Diameter}^2 \times 0.7854) \times \text{Root Ball Height}]}{46656}$$

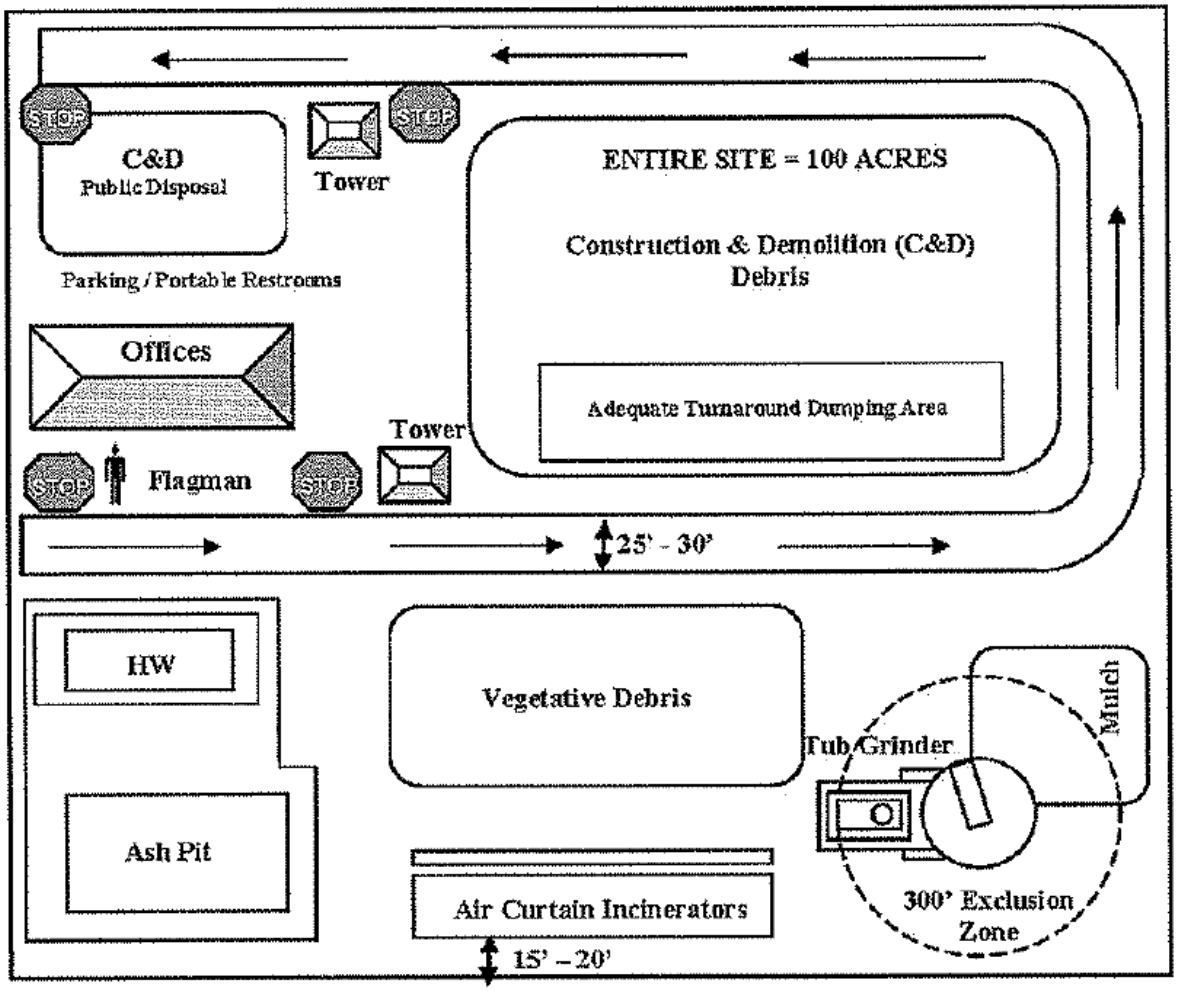
0.7854 is one-fourth Pi and is a constant.
46656 is used to convert cubic inches to cubic yards and is a constant

The formula used to calculate the cubic yardage used the following factors, based upon findings in the field:

- Stump diameter measured two feet up from ground
- Stump diameter to root ball diameter ratio of 1:3.6
- Root ball height of 31"

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		

ATTACHMENT C: Sample DMS Layout with Operational Boundaries



ATTACHMENT D: Unit Price Contract Summary Matrix

Unit Price Contract Summary Matrix						
Type of Contract	Structure and Use	Required Provisions	Advantages	Disadvantages	Monitoring	Documentation
UNIT PRICE	Uses units of measure (cubic yards, tons, each) and prices to develop line item costs and total contract costs	Specific documentation requirements, based on quantifiable units, such as load tickets, and payment	Scope of work may be adjusted easily at a known cost	Possibility of contractor fraud if operations are not closely monitored	Labor intensive	Load ticket system
	Used when scope of work is difficult to quantify. The bid proposals are based on applicant-estimated quantities and units of work		Accurate account of actual quantities when work is complete	Trucks require measurement and loads accurately documented		Monitors at collection points and where the debris is unloaded (DMS or final disposition)
			Simplicity of contract encourages competition	Segregated curbside collection may complicate the scope of work		
			Low risk for contractors			

ATTACHMENT E: Lump Sum Contract Summary Matrix

Lump Sum Contract Summary Matrix

Type of Contract		Structure and Use	Required Provisions	Advantages	Disadvantages	Monitoring	Documentation
LUMP SUM	All Lump Sum	Establishes a fixed contract based on the applicant scope of work specified in the bid solicitation Used when the scope of work is clearly defined by the applicant, including quantity, type, and location of debris	Specific process for a change order request, exact quantity of debris, and types of debris. Provision to cover if the collection or unloading location changes after the contract is awarded	Cost is established at the bid opening Easy to determine when the work is complete	Scope of work must be very specific to avoid change orders Often difficult to quantify debris and identify the types of debris requiring collection	Minimum	Amount of debris collected, reduced/ recycled, and disposed will be required to establish reasonable price
	Collection - Area Method	Used when a well defined area can be provided for bidding purposes	Specific process for a change order request, exact quantity of debris, and types of debris. Provision to cover if the collection or unloading location changes after the contract is awarded		Scope of work has to be accurately quantified to minimize change orders Estimating the amount of debris to be brought to the rights-of-way difficult to determine High probability of change orders if estimates are based on speculation	Minimum	Amount of debris collected, reduced/ recycled, and disposed will be required to establish reasonable price
	Collection - Pass Method	Defines how many times a curbside collection will be completed on a particular street or through a well defined area	Specific process for a change order request, exact quantity of debris, and types of debris. Provision to cover if the collection or unloading location changes after the contract is awarded	Possibility of fewer change orders since the scope of work is better defined Average management duties	Up-to-date street information and plans to be included in the scope of work Requires cooperation of the public to place only eligible debris at the curb and participate in segregating materials Intense public information campaign	Minimum	Amount of debris collected, reduced/ recycled, and disposed will be required to establish reasonable price

ATTACHMENT F: Time and Materials Contract Summary Matrix

Time-and-Materials Contract Summary Matrix						
Type of Contract	**Structure and Use**	**Required Provisions**	**Advantages**	**Disadvantages**	**Monitoring**	**Documentation**
TIME-AND-MATERIALS	Paid on an hourly rate for labor, materials, and equipment	Capped by the period of performance and/or monetary ceiling	Good for response activities	Requires close contractor oversight and direction as to work to be performed	Labor Intensive	Intense
	A known quantity of work is not established prior to the contractor beginning work	Price for equipment applies only when the equipment is in use	Extremely flexible; not limited by a specific scope of work	Requires documentation of actual hours worked by equipment and operators		Actual labor and equipment must be accounted for during entire performance period
		Hourly rate for equipment includes fuel, maintenance, and repair	Range of uses; appropriate clearance of major access routes or roads to critical facilities	Reasonable hourly rates may be difficult to establish if not competitively bid		
		Bids should include all overhead costs		Equipment specifications may have to be generalized in order to encourage competition		
		Specific hours the contractor is to perform work (to ensure monitoring staff is present to document activity)		Requires full-time trained monitors to document work completed and verify hours worked		
		No guarantee of a minimum number of hours				
		If multiple contracts are awarded, the period of performance should run concurrently rather than consecutively				

ATTACHMENT G: Operational Safety Awareness & Regulations

Potential Hazards

Wyandotte County responders, along with contracted workers, may face the following potential hazards while performing debris management operations:

• Unstable work surfaces	• Roadside work
• Structural integrity	• Driving
• Flying debris (eye injuries)	• Breathing dust and fine air particles
• Heavy equipment	• Falling Ice & Debris
• Electrical	• Carbon monoxide and smoke inhalation
• Excessive noise	• Severe weather
• Falls from heights	• Potential chemical exposures
• Molds	• Bites and stings
• Blood-borne diseases	• Water and food sanitation
• Personal sanitation and Hygiene	• Traumatic stress
• Confined spaces	• Heat stress and cold stress

Safety Regulations

Wyandotte County personnel are subject to the rules and regulations of the Kansas Department of Labor, while contracted personnel are subject to OSHA regulations. However, since these regulations are often tied together, the following list of regulations will be considered before, during, and after all debris management activities.

- 29 CFR 1910.1200 (HazCom)
- 29 CFR 1910.120 (Hazwoper)
- 29 CFR 1910.134 (Respiratory Protection)
- 29 CFR 1910.146 (Confined Spaces)
- 29 CFR 1910.1030 (Bloodborne Pathogens)
- 29 CFR 1926.20-35 (General Construction),
- 29 CFR 1910.23 (Fall Protection),
- 29 CFR 1915.159 (Fall Arrest Equipment)
- 29 CFR 1910.132 (Personal Protective Equipment),
- 29 CFR 1910.137 & 29 CFR 1910.332 (Electrical safety),
- 29 CFR 1910.147 (Lockout/Tagout), and
- All other local, State, or Federal safety regulations.

Health Concerns

Exposure to potentially hazardous conditions may require immunization and/or monitoring from public health experts. Specific considerations include tetanus, hepatitis A, or other vaccines as recommended by the Wyandotte County Public Health Department.

Attachment H: Federal Guide Load Ticket

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
☐ Vegetation ☐ C&D ☐ White Goods ☐ HHW ☐ Other* See Below	

Unloading	Time	Date	Inspector/Monitor

DMS Name and Location

*Other Debris Explanation	Original: Applicant Copy 1: _____ Copy 2: _____ Copy 3: _____

ATTACHMENT I: Sample Debris Load Ticket

LOAD TICKET	**Ticket No.** 000001
Section 1	
Prime Contractor:	**Date:**
Subcontractor (Hauler):	**Departure Time:**
Driver:	**Truck Plate No.:**
Measured Bed Capacity (cu. yds.):	
Debris Pickup Site Location: **(must be a street address)**	
Debris Type: □ **Vegetation** □ **Construction & Demolition** □ **Mixed** □ **Other:**	
Loading Site Monitor: **Print Name:** **Signature:**	
Remarks:	
Section 2	
Debris Disposal Site Location:	
Estimate Debris Quantity: cu. yds. _____	**Arrival Time:**
Disposal Site Monitor: Print Name: _____ **Signature:**	
Remarks:	
Copies: White – Load Site Monitor Green – Disposal Site Monitor Canary, Pink, Gold – Onsite Contractor's Representative or Driver	

ATTACHMENT J: Debris Management Sites and Available Landfills

Debris Management Sites	**Routine:** County HHW Drop Off	**Routine:** County Vegetation Processing	**Routine:** Waste Management Landfill	**Emergent:** Providence Medical Center Amphitheater	**Emergent:** Orville Avenue	**Emergent:** Wolcott and Hutton
Ownership	City of Kansas City, Kansas	City of Kansas City, Kansas	Waste Management Inc.	Board of County Commissioners	Wyandotte County Landbank	City of Kansas City, Kansas
Location	2442 S 88th St. Kansas City, KS 66111	8205 Riverview Ave, Kansas City, KS 66112	17955 Holliday Drive, Shawnee Mission, KS 66217	633 N 130th St., Bonner Springs, KS 66012	4533 Orville Ave., Kansas City, KS 66102	9612 Main St, Kansas City, KS 66109
Latitude and Longitude	39.056321, -94.781312	39.097481, -94.770357	39.041093, -94.793660	39.111419, -94.878152	39.108984, -94.686066	39.188039, -94.802626
Size	12 Acres	8 Acres	NA	36 Acres	24 Acres	4 Acres
Access Route – Ingress	I 435 to Woodend Ave to S 88th St.	I 70 to N 78th St to Riverview Ave to N 82nd Ter.	I 435 to Holliday Dr to Woodwardz St.	State Ave. to N 126th St, or State Ave. to N 130th St on the west side.	State Ave. to N 47th St., then south to Orville Ave.	I-435 to K-5 Hwy North, to Hutton Rd., to Wolcott Dr.
Ingress Road Types	Paved, gravel on site	Paved to gravel	Paved, gravel on site	Paved	Paved, gravel on site	Paved
Access Route – Egress	Same as ingress	Same as ingress	Same as ingress	N 126th St on east side of property	South out of lot to Kaw Dr.	Same as Ingress
Egress Road Types	Paved	Gravel to paved	Gravel to paved	Paved	Gravel to paved	Paved
Approved Debris Streams	HHW and Vegetation	Vegetation	Vegetation	Can be used for vegetation and C&D, but would need approval from KDHE	Can be used for vegetation and C&D, but would need approval from KDHE	Can be used for vegetation, but would need approval from KDHE
Environmental Status	Approved	Approved	Approved	Not currently approved	Not currently approved	Not currently approved

Note: None of these locations will accept radiological material or putrescent waste.

ATTACHMENT K: Truck Certification Form

DUMP TRUCK

Measurements

Truck Measurements — Length (L) = _____ Width (W) ft = _____ Height (H) ft = _____

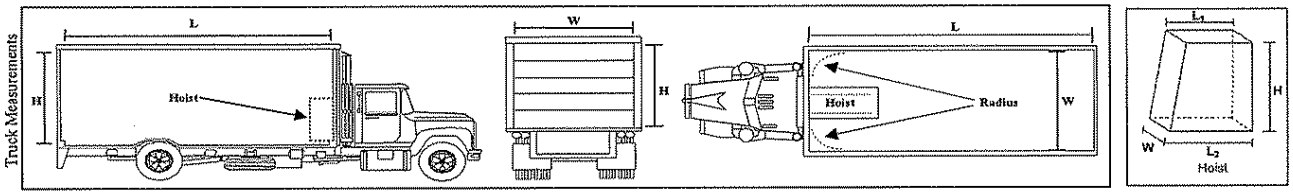
Hoist Measurement — $Length_1$ (L_1) ft = _____ $Length_2$ (L_2) ft = _____ $WidthH$ (W_H) ft = _____ $Height_H$ (H_H) ft = _____

Radius — Radius ft = _____ Height (H) = _____

Calculations

Bed Volume (Basic)	(LxWxH)/27 =	+	cyd
Hoist Volume	((L1+L2/2) x W_H x H_H)/27 =	-	cyd
Radius Volume	(3.14xR^2xH)/27 =	-	cyd
	Total =		cyd

Cubic Yards



EXTRA TRAILER

Measurements

Truck Measurements (Basic) — Length (L) = _____ Width (W) ft = _____ Height (H) ft = _____

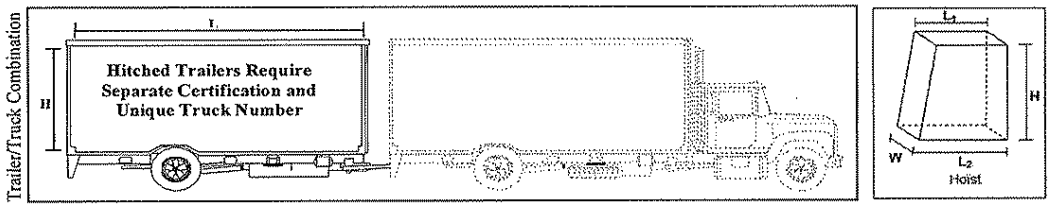
Hoist Measurement — $Length_1$ (L_1) ft = _____ $Length_2$ (L_2) ft = _____ $WidthH$ (W_H) ft = _____ $Height_H$ (H_H) ft = _____

Radius — Radius ft = _____ Height (H) = _____

Calculations

Bed Volume (Basic)	(LxWxH)/27 =	+	cyd
Hoist Volume	((L_1+L_2/2) x W_H x H_H) =	-	cyd
Radius Volume	(3.14xR^2xH)/27 =	-	cyd
	Total =		cyd

Cubic Yards



ROUND BOTTOM TRUCK

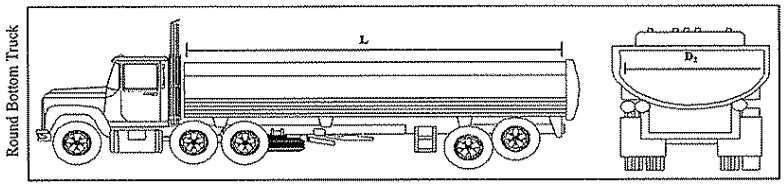
Measurements

Truck Measurements — Length (L) ft = _____ Diameter (D) ft = _____

Calculations

Approx. Volume (3.14 x $(D/2)^2$ x L) /27 = _____ cyd (round bottom portion only)

Cubic Yards



General Information

Applicant: _____ Monitor: _____

Contractor: _____ Date: _____

Measurement Location: _____ County: _____

Declaration Number: _____

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

(See reverse for calculation worksheet)

ATTACHMENT L: Debris Monitoring Tips

Debris monitoring is a critical piece of the overall operation. By avoiding the following fraudulent acts, operational compliance is maintained:

Inaccurate Truck Capacities – Trucks will be measured before operations, and load capacities will be documented by truck number. Periodically, trucks will be pulled from operations and reassessed.

Trucks Not Fully Loaded – Do not accept the contention that loads are higher in the middle and if level would fill the truck.

Trucks Lightly Loaded – Trucks arrive loaded with treetops with extensive voids in the load. Trucks need to be loaded to their full capacity with front end loaders or other similar equipment.

Trucks Overloaded – Trucks cannot receive credit for more than the measured capacity of the truck or trailer bed even if material is above the sideboards.

Changing Truck Numbers – Trucks are listed by an assigned vehicle number and capacity. There have been occasions where truck or trailer numbers with a smaller carrying capacity have been changed to one with a larger capacity. Periodically re-measuring the trucks will identify this issue.

Reduced Truck Capacity or Increased Truck Weight – There have been occasions where trucks have had heavy steel grating welded two to three feet above the bed after being measure, thus reducing the capacity or inflating the weight of the load. Periodically re-measuring the trucks will identify this issue.

Wet Debris When Paid by Weight – Excessive water added to debris will increase the weight of the load. When the contractual unit cost is based on weight, this increases the cost to Wyandotte County. This can be detected during monitoring if there is excessive water dripping from the truck bed.

Multiple Counting of the Same Load – Trucks have been reported driving through the disposal site without unloading, then re-entering with the same load. This can be detected by observing the time of departure and the time of arrival recorded on the driver's load ticket.

Picking up Ineligible Debris – Monitors will have a good understanding of eligible debris and any time limits imposed on picking up specific types of debris.

ATTACHMENT M: List of Preferred Vendors

Asplundh Tree Expert Co. and Kaw Valley Sand and Gravel Inc. were pre-selected as potential debris management vendors during disaster response and recovery operations. Selected information for each company is listed below:

	Asplundh Tree Expert Co.	**Kaw Valley Sand and Gravel Inc.**
Phone Number:	816-453-1300	913-281-9550
Corporate Address:	708 Blair Mill Road Willow Grove, PA 19090	5600 Kansas Ave. Kansas City, KS 66106
Firm Size:	National	Local
Year Established:	2001	1984
Licensed in Kansas:	Yes	Yes
Primary Contact:	Scott Leonard: 913-469-5440 or 913-915-0182	Tim Cates: 913-281-9550
Dedicated Equipment:	Lifts, chippers, loaders, trucks, etc.	Demolition equipment, excavating equipment, on-site recycling equipment, crushing equipment, and more
Quoted Price:	Determined per incident	Determined per incident

The specific proposals for each company will be determined at the time of the incident.

Attachment N: Debris Notification Sheet

Your area has been involved in a disaster event

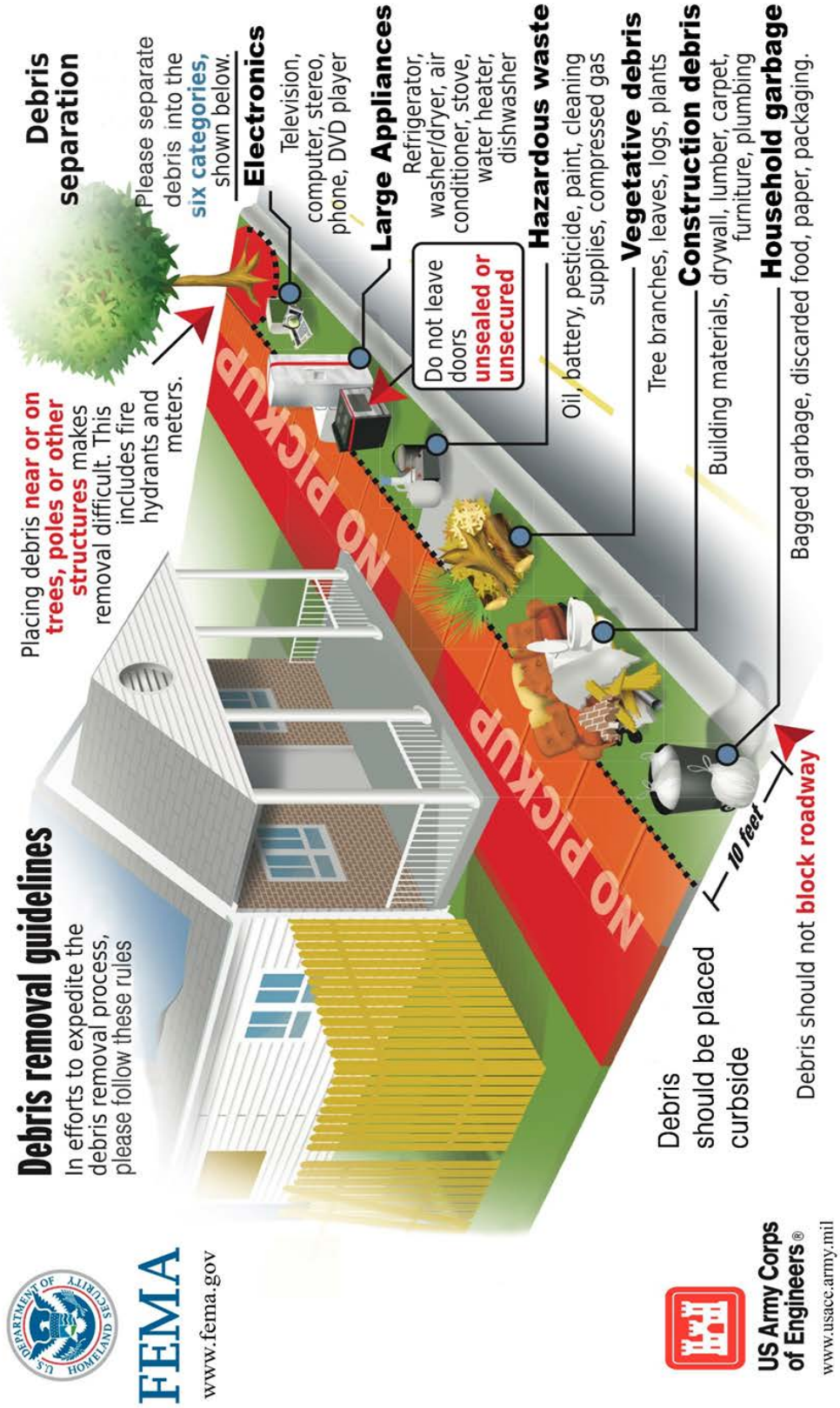
Please avoid placing debris over Fire Hydrants and Gas Meters and in the street.

To assist in the debris clean up, please separate the following at the curbside.

To Expedite Clean-up efforts please separate debris as follows in separate piles:

- *Trees and Vegetation*
- *White goods (washing machine, refrigerators)*
- *Clean construction debris (2x4's and such, plywood)*
- *Metals*
- *Household hazardous chemicals (Paints, bug killers, cleaning products)*
- *Electronic Waste (TVs, computers, etc.)*
- *Personnel Property*

We thank you for your cooperation through these trying times; any questions please call 311.


Debris removal guidelines
In efforts to expedite the debris removal process, please follow these rules
Debris separation
Please separate debris into the six categories, shown below.
Placing debris near or on trees, poles or other structures makes removal difficult. This includes fire hydrants and meters.
Electronics
Television, computer, stereo, phone, DVD player
Large Appliances
Refrigerator, washer/dryer, air conditioner, stove, water heater, dishwasher
Do not leave doors unsealed or unsecured
Hazardous waste
Oil, battery, pesticide, paint, cleaning supplies, compressed gas
Vegetative debris
Tree branches, leaves, logs, plants
Construction debris
Building materials, drywall, lumber, carpet, furniture, plumbing
Household garbage
Bagged garbage, discarded food, paper, packaging.
NO PICKUP
NO PICKUP
10 feet
Debris should be placed curbside
Debris should not block roadway
Published with permission of the Tuscaloosa News
FEMA
www.fema.gov
US Army Corps of Engineers®
www.usace.army.mil

Attachment O: Right of Entry

RIGHT OF ENTRY AGREEMENT

I/We _____, the owner(s) of the property commonly identified as

_____ _____ _____, State of _____
(street) (city/town) (county)

do hereby grant and give freely and without coercion, the right of access and entry to said property to the County/City of_____, its agencies, contractors, and subcontractors thereof, for the purpose of removing and clearing any or all storm-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 City/County of _____, State of _____, its agencies, contractors, and subcontracts, 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 storm damaged sewer lines, water lines, and other utility lines located in the described property.

I/We (have _____, have not _____) (will _____, will not _____) receive any compensation for debris removal from any other source including Small Business Administration (SBA), National Resource Conservation Service (NRCS), private insurance, individual and family grant program or any other public assistance program. I will report for this property any insurance settlements to me or my family for debris removal that has been performed at government expense. For the considerations and purposes set forth herein, I set my hand this _____ day of _____, _____.

_____ _____
Owner Witness

_____ Telephone No.
Owner

Telephone No. and Mailing Address

Attachment P: Debris site check off

Disaster Debris Management Site Selection Worksheet

Site Name _____

Site Address _____

Estimated Size in Acres _____

Estimated Volume of Debris Able to Hold (cubic yards)_____

(Note: Assume up to 16,000 cubic yards/acre and only 40 percent of site available for debris storage.)

Primary Local Government Point of Contact:

Name _____Phone _____Email _____

Secondary Local Government Point of Contact:

Name _____Phone _____Email _____

Preferred Disaster Debris Management Site Criteria

☐ The site is owned or controlled by municipal or state government.

☐ The site has easy access, including being near the area of debris generation, easy to enter and exit, and near transportation arteries.

☐ The site is ready to use as a debris management site without extensive site modifications.

☐ The debris storage and handling areas would be at least 100 feet from property lines.

☐ To the maximum extent possible, the site location minimizes potential environmental and public health impacts, including considering setbacks from public water supplies, surface water bodies, and residential dwellings and avoiding areas such as flood plans, drinking water Zone IIs, and Areas of Critical Environmental Concern.

If any of these criteria are not met, please explain why not and how any concerns regarding that criterion would be addressed: _____
_____
_____
_____

Anticipated Site Activities
(Note: intended for use only in declared disaster, NOT for routine operation.)

☐ A site plan and layout has been prepared that considers the management and operating practices recommended in this guidance.

What types of disaster debris do you expect to manage at this site? (e.g., vegetative waste, C&D debris, hazardous household products, etc) _____
_____
_____

What debris processing or other handling activities do you expect to conduct at this site? (e.g., sorting and transfer for recycling, chipping vegetative waste, transfer of trash for disposal, etc.)_____
_____
_____

Please summarize any other benefits or concerns with using this site as a debris management site.