LUMPKIN COUNTY RESOLUTION NO. 2011 – 44

A RESOLUTION TO ADOPT
THE
LUMPKIN COUNTY DEBRIS MANAGEMENT PLAN

Whereas, the governing authority of Lumpkin County has recognized the need for a comprehensive plan for dealing with debris from natural and other disasters; and,

Whereas, the Georgia Emergency Management Agency has further advised that having adopted and implemented such a plan will be a requirement for reimbursement for cleanup cost following a disaster; and,

Whereas, the governing authority of Lumpkin County now desires to adopt such a Debris Management Plan;

Now therefore, it is hereby resolved that the Debris Management Plan attached hereto as Exhibit "A," and which is by reference fully incorporated herein, shall be adopted as a part of the hazard mitigation concept for Lumpkin County.

Resolved, adopted and effective this 21st day of July, 2011.

John Raber, Chairman
Lumpkin County Board of Commissioners

Attest:

Kathleen C. Walker
Clerk, Lumpkin County

DEBRIS MANAGEMENT PLAN

Purpose

To facilitate and coordinate the removal, collection, and disposal of debris following a disaster, to mitigate against any potential threat to the health, safety, and welfare of the impacted citizens, and expedite recovery efforts in the impacted area, and address any threat of significant damage to improved public or private property.

Introduction

Natural and man-made disasters precipitate a variety of debris that includes, but is not limited to, such things as trees, sand, gravel, building/construction materials, vehicles, personal property, etc.

The quantity and type of debris generated from any particular disaster is a function of the location and kind of event experienced, as well as its magnitude, duration, and intensity.

The quantity and type of debris generated, its location, and the size of the area over which it is dispersed directly impacts the type of collection and disposal methods used to address the debris problem, associated costs incurred, and the speed with which the problem can be addressed.

In a major or catastrophic disaster, Lumpkin County may have difficulty in locating staff, equipment, and funds to devote to debris removal, in the short as well as long term.

Private contractors play a significant role in the debris removal, collection, reduction, and disposal process.

The debris management program implemented by Lumpkin County will be based on the waste management approach of reduction, reuse, and reclamation, resource recovery, incineration, and land filling, respectively.

Concept of Operations

The Lumpkin County Road Department is responsible for the debris removal function. The Road Department (RD) will work in conjunction with designated support agencies, utility companies, waste management firms, and trucking companies to facilitate the debris clearance, collection, reduction, and disposal needs following a disaster. RD will be responsible for removing debris from the public right-of-way.

Because of the limited quantity of resources and service commitments following the disaster, Lumpkin County may be forced to rely heavily on private contractors to remove, collect, and manage debris for reuse, resource recovery, reduction, and disposal. When it is deemed necessary, and in the best interest of the county, the entire process (i.e., clearance, collection, transporting, reduction, and disposal, etc.) or segments of the process can be contracted out.

The Lumpkin County Road Department may also develop and maintain a list of approved contractors who have the capability to provide debris removal, collection, and disposal in a cost effective, expeditious, and environmentally sound manner following a disaster.

Responsibilities
This section is designed to outline which departments and/or agencies have responsibilities to provide debris removal service during the recovery phase of a local disaster. These agencies and their responsibilities are outlined below.

1. **Lumpkin County Emergency Management Agency (EMA)** – The Lumpkin County EMA is responsible for developing, maintaining, and exercising the Lumpkin County Debris Management Plan. The EMA Director will work with the heads of the other agencies and departments outlined in the plan to develop and implement this plan. The EMA Director will be responsible for coordinating the needed resources to facilitate debris removal which may include activating pre event debris removal contracts with private vendors.
2. **Lumpkin County Finance Department** – The Lumpkin County Finance Department will responsible for ensuring that all aspects of the Debris Management plan are carried out in accordance with the appropriate accounting practices under applicable local, state, and federal regulations. The Purchasing Agent will be responsible for working with the EMA Director to develop an RFP which will be used to select the debris removal contractors. They will also be responsible for providing notice to the selected contractors and obtaining copies of pre event contracts from the awardees.
3. **Lumpkin County Attorney** – The Lumpkin County Attorney will be responsible for reviewing all contracts received from any vendor to ensure completeness, accuracy, and that they meet all applicable local, state, and federal legal requirements.
4. **Lumpkin County Road Department** – Lumpkin County Road Department is the primary department within Lumpkin County responsible for debris removal. They will be responsible for providing debris removal before, during, and after any disaster which affects Lumpkin County. If the event is of the magnitude that it overwhelms their resource capabilities, the Public Works Director will enact mutual aid agreements with neighboring jurisdictions. In the event that sufficient mutual aid is not available then the Public Works will communicate the need for additional resource support to the EMA Director who will then be responsible for coordinating the acquisition of additional resources which may include private contractors.
5. **Volunteer Groups** – Various volunteer groups have been identified to assist in debris removal and clean up during disaster operations. These groups would operate under authority of the Emergency Management Agency and be assigned to various support roles under the supervision and direction of the Road Department Superintendent. Examples of these types of volunteer groups are CERT, American Red Cross volunteers, local church, civic organizations, and others.
6. **Private Contractors** – Private contractors may be employed to supplement the efforts of County and volunteer work crews. If it is determined that the available resources are insufficient to complete the debris removal process in a timely manner then pre-selected private contractors may be utilized to perform all or parts of the clean up. They will be advised and given explicit details as to the scope of their operations. The extent of their involvement will be dictated by the needs of the county and are incident specific.

Priorities
The debris removal process must be initiated promptly and conducted in an orderly, effective manner in order to protect public health and safety following a major or catastrophic event. To achieve this objective, the first priority will be to clear debris from

key roads in order to provide access for emergency vehicles and resources into the impacted area. Key roads in Lumpkin County are identified as follows:

1. US Hwy 19
2. Auria Rd
3. Cavenders Creek Rd
4. Burnt Stand Road.
5. Town Creek Church Rd
6. Camp Wahsega Rd
7. Oak Grove Rd
8. Red Oak Flats Rd
9. Long Branch Rd.
10. SR 52
11. SR 115
12. SR 9
13. SR 60

The need and demand for critical services will be increased significantly following a disaster. Therefore, the second priority that debris removal resources will be assigned is providing access to critical facilities pre-identified by State and local governments. Critical facilities in Lumpkin County have been identified as:

1. Lumpkin County 911 Center (57B Pinetree Way)
2. Lumpkin County Fire Rescue Headquarters (57A Pinetree Way)
3. Lumpkin County Emergency Operations Center (57B Pinetree Way)
4. Lumpkin County Board of Commissioners (99 Courthouse Hill, Suite A)
5. Chestatee Regional Hospital (227 Mountain Drive)
6. Lumpkin County Detention Center (385 East Main Street)

The third priority for the debris removal teams to address will be the elimination of debris related threats to public health and safety. This will include such things as the repair, demolition, or barricading of heavily damaged and structurally unstable buildings, systems, or facilities that pose a danger to the public. Any actions taken to mitigate or eliminate the threat to the public health and safety must be closely coordinated with the owner or responsible party. If access to the area can be controlled, the necessary actions can be deferred.

Health and Safety

All workers operating under the authority of Lumpkin County will abide by all Lumpkin County safety policies and procedures and be covered under the County Worker's Compensation Insurance. In addition to the County policy they are expected to abide by all applicable state and federal guidelines governing workplace safety. These policies and guidelines are issued to every employee upon being hired and are posted prominently when required. The Lumpkin County Risk Manager will serve as the Health and Safety Officer.

The health and safety of workers as well as the general public will be given the highest priority throughout the entire operation. During the daily briefing where crews are given their assignments, there will be time devoted to brief all personnel on safety practices and inform them of any accidents that may have occurred the previous work shift. Examples of safety topics that may be included in the briefings are things such as safety belt use, using PPE, being aware of the potential for shifting loads, working around charged electrical lines, etc. Crew leaders should ensure that every member of their crew is issued

and uses proper protective equipment prior to beginning work to include but not limited to, hard hat, gloves and safety glasses. Other safety items to be considered are such things as dust masks, steel toed shoes, etc.

Personnel required to drive or operate heavy machinery will be checked to ensure that they have the proper license and/or certification to operate such equipment and/or vehicles.

A safety officer will be appointed for each crew including site monitoring activities. This safety officer will stop operations any time they witness anything deemed to be an unsafe act. If an individual is found to engage in unsafe actions on a continual basis they may be relieved from duty immediately. A written report will be made and a copy sent to the employee's immediate supervisor.

In accordance with County policy all accidents must be reported immediately, appropriate report and documentation completed, and drug screening performed before the individual(s) are allowed to return to duty.

Estimating Debris Quantities

The formula for estimating debris quantity is: **Q=H(C) (V) (B) (S)**

H (Households) =Population/3 (3 persons per household)
C (Category of Storm) =Factor (See table below)
V (Vegetation Multiplier) = Factor (See table below)
B (Commercial Density Multiplier) = Factor (See table below)
S (Precipitation Multiplier) = Factor (See table below)

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

Vegetative Cover	Value of "V" Multiplier
Light	1.1
Medium	1.3
Heavy	1.5

Commercial Density	Value of "B" Multiplier
Light	1.0
Medium	1.2
Heavy	1.3

Precipitation	Value of "S" Multiplier
None to Light	1.0
Medium to Heavy	1.3

Once the amount of debris has been estimated, the county will require temporary storage sites the size of which can be determined by taking the following factors into consideration:

1. The debris pile shall be stacked to a height of no more than 10 feet.

2. 60% usage of the land area will be devoted to roads, safety buffers, and burn pits, household hazardous waste, etc.
3. 10 foot stack height = 3.33 yards
4. 1 acre = 4,840 square yards (sy)
5. Total volume per acre = 4,840 sy/ac x 3.33y = 16,133 cy/ac.

Using the above assumptions, the estimate of total debris from any hurricane will be within 30% plus or minus of the actual amount of debris accumulated.

Lumpkin County has estimated that under an average scenario, e.g., is a Category 3 hurricane, medium vegetation cover, light commercial density, and medium to heavy precipitation, the amount of acres needed for a temporary landfill is 45.4 acres. The calculation (assuming a population of 30,000) is as follows:

Q = H(C) (V) (B) (S)
Q = 10,000 x 26 x 1.3 x 1.0 x 1.3
Q = 439,400 CY of debris.

436,000 (CY of debris) / 16,133 (cy/ac) = 27.24 acres of debris.
27.24 acres x 1.66 (60% more area needed for roads, etc.)= 45.4 acres.

Note: To help visualize what 436,000 CY of debris looks like, picture a building occupying 1 acre. 1,000,000 CY of debris would create a stack 62' high on one acre. That building would be 27 feet high or approximately 2.7 stories high.

Site Selection
Debris storage and reduction sites will be identified and evaluated by the Lumpkin County Road Department based on their knowledge of the area and the availability of suitable county owned and/or maintained properties.

In most cases, debris will initially be placed in one of several temporary holding areas, determined before the onset of the disaster, until such time as a detailed plan of debris collection and disposal is prepared. This is not anticipated until after the local traffic has been restored. Temporary debris collection sites should be readily accessible by recovery equipment and should not require extensive preparation or coordination for use. Collection sites will be on public property to facilitate the implementation of the mission and mitigate against any potential liability requirements. Activation of sites will be under the control of the Director of Public Works, and will be coordinated with other recovery efforts through the Emergency Operations Center.

C&D debris from private property will not be accepted at any county owned staging sites. Any C&D debris will be disposed of directly at the Lumpkin County Transfer Station which is operated by a private contractor.

All of the above mentioned sites and any additional sites that may be identified during an event shall have drive thru access to facilitate increased safety and more efficient operations. All vehicles will enter through an access point clearly marked as "Entrance Only" and pass through the monitoring station. They will be able to pull to the offload site and then exit through a separate point marked with "Exit Only" signage. At no time should a vehicle be required to back up or meet another vehicle traveling in the opposite direction.

Debris Classification
To facilitate the debris management process, debris will be segregated by type. It is recommended that the categories of debris established for recovery operations will be standardized. Lumpkin County will adopt the categories established for recovery operations by the U.S. Army Corps of Engineers*. Debris removed will consist of two broad categories, clean wood debris and construction and demolition (C&D) debris. Most common hurricane/tornado-generated debris will consist of 30% clean woody material and 70% C&D. Of the 70% mixed C&D it is estimated 42% will be burnable but require sorting, 5% will be soil, 15% will be metals, and 38% landfill.

Definitions of classifications of debris are as follows:

Burnable Materials: Burnable materials will be of two types with separate burn locations:

Burnable Debris: Burnable debris includes, but is not limited to, damaged and disturbed trees; bushes and shrubs; broken, partially broken and severed tree limbs; and bushes. Burnable debris consists predominately of trees and vegetation. Burnable debris does not include garbage or construction and demolition material debris.

Burnable Construction Debris: Burnable construction and demolition debris consists of non-creosote structural timber, wood products, and other materials designated by the coordinating agency representative.

Non-burnable Debris: Non-burnable construction and demolition debris includes, but is not limited to, creosote timber, plastic, glass, rubber and metal products, sheet rock, roofing shingles, carpet, tires, and other materials as may be designated by the coordinating agency. Garbage will be considered non-burnable debris.

Stumps: Stumps will be considered tree remnants exceeding 24 inches in diameter; but no taller than 18 inches above grade, to include the stump ball. Any questionable stumps shall be referred to the designated coordinating agency representative for determination of its disposition.

Ineligible Debris: Ineligible debris to remain in place includes, but is not limited to, chemicals, petroleum products, paint products, asbestos, and power transformers.

Any material that is found to be classified as hazardous or toxic waste (HTW) shall be reported immediately to the designated coordinating agency representative. At the coordinating agency representative's direction, this material shall be segregated from the remaining debris in such a way as to allow the remaining debris to be loaded and transported. Standing broken utility poles, damaged and downed utility poles and appurtenances, transformers and other electrical material will be reported to the coordinating agency representative. Emergency workers shall exercise due caution with existing overhead and underground utilities and above ground appurtenances, and advise the appropriate authorities of any situation that poses a health or safety risk to workers on site or to the general population.

*Debris classifications developed and used by the Corps of Engineers in Hurricane Andrew recovery.

Debris Management Actions
Debris removal operations will be conducted in two phases. The initial phase will consist of clearing debris from affected areas identified as a high priority in order to maintain viable transportation corridors and provide essential services to the population at large. Many of these priority areas have been identified elsewhere in this plan. A preliminary damage assessment will be conducted concurrently with this phase of operation to determine the scope of damage as well as developing time and cost estimates for the recovery process.

Once the initial phase of debris removal operations has been concluded and damage assessments findings have been reviewed the next phase will begin which will involve clearing debris from all public right of ways and publicly owned property. During this phase it will likely be necessary to utilize the service of one or more of the debris removal contractors identified later in this plan with which Lumpkin County has established pre event contracts. This decision will be guided by the estimates provided in the preliminary damage assessment and the amount of available Road Department resources.

Site Monitoring
In order to ensure that all debris removal activities are conducted in a manner consistent with FEMA guidelines and to ensure that Lumpkin County retains its eligibility to receive funding for reimbursement should it become available, monitoring stations will be set up at each collection and disposal site. A site monitor will be established to ensure that debris is separated properly before being loaded at the loading site. All site monitoring will be conducted by Lumpkin County personnel whether operations are being conducted by Lumpkin County resources, private contractors, or both.

Once debris is loaded it will be hauled to the temporary disposal sites where it will be off loaded into the appropriate area. There will be a site manager assigned to oversee operations at these sites and to direct the efforts of the individual site monitors. As the driver enters the disposal site he will stop at a monitoring station where the load will be inspected to ensure that it has been separated, loaded properly, and is being transported in an approved container. The load will also be inspected and an estimated volume determined and recorded on the appropriate reporting forms. Once the load is cleared at the monitoring station it will proceed to the off load point where another monitor will supervise the off loading to ensure that the load is placed in the appropriate location and there are no problems with the load that may not have been identified at earlier stations.

Site Close Out
Each temporary debris staging and reduction site will eventually be emptied of all material and be restored to its previous condition and use.

Before activities begin ground and aerial photos will be taken, important features such as structures, fences, culverts, and landscaping will be noted. Random soil samples will be taken as well as water samples from existing wells. The site will be checked for volatile organic compounds.

After activities begin, constant monitoring of air quality and soil and water samples will take place. Photo, maps, and sketches of the site will be updated and fuel spills will be noted.

At close-out final testing of soil, water, and air quality and compared to original conditions. All ash will be removed and any remediation actions will be taken.

Disposal and Reduction
Once the debris is removed from the damage sites, it will be taken to the temporary land fills. The three methods of disposal are burning, recycling, and grinding/chipping.

Grinding and chipping will be utilized as a viable reduction method. Grinding and chipping reduces the volume on a 4 to 1 ratio. For grinding and chipping to be feasible, 25% of volume remaining must have some benefit or use.

The three primary burning methods are open burning, air curtain pit burning, and incineration. Any and all burning will be conducted with regards to all applicable local, state, and federal environmental regulations. Controlled open burning is a cost-effective method for reducing clean woody debris in rural areas. Burning reduces the volume by 95%, leaving only ash residue to be disposed of. Air curtain pit burning substantially reduces environmental concerns. The blower unit must have adequate air velocity to provide a "curtain effect" to hold smoke in and to feed air to the fire below. Portable incinerators use the same methods as air curtain pit systems. The only difference is that portable incinerators utilize a pre-manufactured pit in lieu of an onsite constructed earth/limestone pit.

Metals, wood, and soils are prime candidates for recycling. Most of the non-ferrous metals are suitable for recycling. The process for recycling debris is addressed in a later section of this plan.

Recycling
Every effort will be made to recycle as much debris related material as possible. Lumpkin County currently operates several local recycling centers where citizens can drop off recyclable materials and will manage recyclable material during a disaster in the same manner. Information on recycling options will be given to the public through press releases issued through the EOC throughout the event.

Reduction of vegetative debris is addressed in a later section of this plan. Several options are made available for the recycling of reduced vegetative debris. Once the debris is ground or chipped Lumpkin County will make efforts to identify possible businesses locally that have use for the reduced material. Once debris operations are concluded and a site can be safely established, reduced debris may be made available free of charge for citizens to use as mulch if an established desire for such use can be established. These options if utilized will reduce the impact on the local landfills.

Lumpkin County will also explore options to recycle other types of debris that may be present during disaster recovery operations. Any type of material that can be recycled in a safe and legal manner will be in order to lessen the environmental impact on local landfills.

Environmental Requirements
In the event that Lumpkin County or a contractor operating under authority of the county chooses to operate a burn pit as a means of reducing debris certain environmental concerns will need to be addressed in accordance with locally established burn ordinances and state and federal environmental and air quality regulations. The following requirements for operating a burn pit will need to be adhered to:

1. A setback of at least 1,000 feet should be maintained between the debris piles and the incineration area. Keep at least 1,000 feet between the incineration area and the nearest building. Contractors should use fencing and warning signs to keep the public away from the incineration area.
2. The fire should be extinguished approximately two hours before anticipated removal of the ash mound. The ash mound should be removed when it reaches 2 feet below the lip of the incineration pit.
3. The incineration area should be placed in an above ground or below ground pit that is no wider than 8 feet and between 9 and 14 feet deep.
4. The incineration pits should be reinforced with earth anchors or wire mesh to support the weight of the loaders. There should be a 1-foot impervious layer of clay on the bottom of the pit to seal the ash from the aquifer.
5. The ends of the pits should be sealed with dirt or ash to a height of 4 feet.
6. A 12-inch dirt seal should be placed on the lip of the incineration pit area to seal the blower nozzle. The nozzle should be 3 to 6 inches from the end of the pit.
7. There should be 1-foot high, unburnable warning stops along the edge of the pit's length to prevent the loader from damaging the lip of the incineration pit.
8. Hazardous or contaminated ignitable material should not be placed in the pit. This is to prevent contained explosions.
9. The airflow should hit the wall of the pit about 2 feet below the top edge of the pit, and the debris should not break the path of the airflow except during dumping.
10. The pit should be no longer than the length of the blower system, and the pit should be loaded uniformly along the length.

Hazardous Materials and Waste

Lumpkin County is not permitted to handle the disposal of household hazardous waste that may be present among storm debris. In the event that such waste disposal becomes necessary Lumpkin County will ensure that those items deemed hazardous, such as aerosol cans, paints, solvents, flammable liquids, poisons, etc., are separated from other types of debris. Citizens will be instructed to take these items to a certified hazardous waste disposal site.

Permits

The responsibility for obtaining and maintaining any and all applicable permits associated with debris removal operations would fall on the Lumpkin County Public Works Director. Based on current plans and practices it is not anticipated that any permits will be required beyond the ones that are currently maintained by Lumpkin County for operation of the transfer station and solid waste management program. If special permits related to traffic flow become necessary they should be obtained from the Lumpkin County Sheriff's Office or Georgia Department of Transportation depending on whether the roads are state or county owned routes. Permits for establishment of burn pits would be obtained from the Lumpkin County Fire Chief.

Private Property

Debris removal from private property is the responsibility of the individual property owner. If debris on residential property and private businesses is so widespread that

public health, safety or economic recovery of the community is threatened, the Public Health Director may authorize the demolition and removal of debris as part of a local health emergency under the authority granted by the State of Georgia. Whenever possible efforts should be made to seek prior approval from FEMA Debris Management Specialist to ensure that operations are conducted in a manner that will allow for reimbursement of expenses should such reimbursement funding become available. There are currently no local ordinances or laws granting provisions for Lumpkin County employees to conduct work on private property during a disaster.

Public Information

During any disaster the Lumpkin County Emergency Management Director (EMA) will be responsible for dissemination of timely and accurate information to the media and the general public regarding the ongoing efforts of the local agencies in conducting debris removal operations. As part of the informational campaign of the EMA Director they will need to develop effective press releases to educate citizens on how the debris removal process will be coordinated and accurately explain what will and will not be removed by work crews under the direction of Lumpkin County and its represented agencies. Proper education on how to separate debris categorically will be vital to ensuring that debris removal operations can move forward as rapidly and efficiently as possible. This information should be coordinated through the Lumpkin County EMA and Road Department. It would also be advisable to develop fact sheets that can be handed out to citizens by workers in the field. This can often times eliminate confusion that may arise from individuals who are simply uninformed of appropriate processes.

Pre Qualified Contractors

Lumpkin County, through its Purchasing Department, is in the process of issuing formal Request for Proposal (Appendix A) from qualified debris removal contractors. In this proposal the contractors will be given a specified list of services that would they may be asked to provide and they were instructed to provide pricing on each of these items. Units of measure were specified for each individual area of service. Once received by the Purchasing Agent these proposals will be reviewed as a whole and the determinations made to seek contracts with at least two (2) contractors selected. In order to eliminate any confusion as to the nature of the request all potential vendors are required to attend a pre-bid meeting at which they are encouraged to present any questions regarding the proposal, the process, or any other area that may not be clear. With their pricing proposal (Appendix B) the contractors are required to submit information on their history and experience, staff and support personnel qualifications, proof of meeting insurance and bonding requirements, the names of individuals authorized to negotiate contracts, and general information on the company such as type of company, physical address of HQ, organizational chart, and contact info.

After advertising a RFP in accordance with Lumpkin County policy and packages are received from several qualified contractors they will be evaluated. These packages will be evaluated to determine if they contain all of the required information and pricing schedules. A decision will be subsequently made to enter into pre event contracts (Appendix C) with the chosen companies based on the criteria contained in the RFP after pricing schedules are compared.