

VIII. DEBRIS MANAGEMENT PLAN

- A. **Purpose:** This Plan was developed to assist Public Works and Park Service plan for and be prepared to respond to emergency debris removal situations. This document outlines components critical to successful debris removal operations and provides key information that will help coordinate and effectively manage debris removal efforts should the area be affected by a major debris-generating event. Generally, To provide organizational structure, guidance, and standards to coordinate the clearing, removal and disposal of debris to mitigate any actual or potential threats to the health, safety, and/or welfare of the population within the impacted areas of the Unincorporated Chatham County following a major disaster.
- B. **References:** This Plan is developed in accordance with the following legal references:
- a. Federal:
 - i. Code of Federal Regulations – Title 44 – Emergency Management and Assistance (44 CFR);
 - ii. Federal Atomic Energy Act of 1954, as amended;
 - iii. Federal Clean Air Act;
 - iv. Federal Highway Administration (FHWA), Emergency Response Program;
 - v. Federal Highway Administration (FHWA), Required Contract Provisions Federal-Aid construction contracts;
 - vi. Federal Water Pollution Control Act;
 - vii. FEMA:
 - 1. FEMA Disaster Assistance Policy DAP9523.6, Mutual Aid Agreements for Public Assistance and Fire Management Assistance;
 - 2. FEMA Fact Sheet RP9580.201, Debris Contracting Guidance;
 - 3. FEMA Fact Sheet 9580.203, Debris Monitoring;
 - 4. FEMA Policy 9525.11, Payment of Contractors for Grant Management Tasks;
 - 5. FEMA Publication 321, Public Assistance Policy Digest;
 - 6. FEMA Publication 322, Public Assistance Guide;
 - 7. FEMA Publication 323, Applicant Handbook;
 - 8. FEMA Publication 325, Debris Management Guide;
 - 9. FEMA Recovery Policy RP9523.9, 100% Funding for Direct Federal Assistance and Grant Assistance.
 - 10. FEMA Publication 329, Debris Estimating Field Guide
 - 11. FEMA Publication 327, Debris Monitoring
 - 12. FEMA RP9525.11, Payment of Contractors for Grant Management Tasks.
 - viii. Homeland Security Presidential Directive #5 – Management of Domestic Incidents;
 - ix. National Response Framework October 2008, as amended;
 - x. Resource Conservation and Recovery Act;
 - xi. Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act).
 - b. State:
 - i. Georgia Emergency Management Act of 1981, as amended;

- ii. Georgia Emergency Management Agency (GEMA), EOP, August 2010;
 - iii. Georgia Department of Natural Resources (GADNR), Environmental Protection Division (EPD), Storm-Generated Debris Guidance, March 2008.
- c. County:
- i. Chatham County Code, Chapter 4, Article III, Emergency Management (Civil Defense), March 2006;
 - ii. Chatham County Disaster Recovery Plan (DRP), October 2009; Annex E, Debris Management and Coordination Strategy, October 2011;
 - iii. Chatham County EOP, April 2007;
 - iv. Chatham County Code, Chapter 21, Article III, Sanitation;
 - v. Chatham County Code, Chapter 21, Article IV, Waste Collection.

C. Assumptions:

- a. Natural and manmade disasters precipitate a variety of debris that include, but are not limited to, such things as trees, sand, gravel, building construction material, vehicles, personal property, and hazardous materials;
- b. The quantity and type of debris generated from any particular disaster will be a function of the location and kind of event experienced, as well as its magnitude, duration, and intensity;
- c. The quantity and type of debris generated, its location, and the size of the area over which it is dispersed will have a direct impact on the type of collection and disposal methods utilized to address the debris problem, associated costs incurred, and how quickly the problem can be addressed;
- d. In a major or catastrophic disaster, many state agencies and local governments will have difficulty in locating staff, equipment, and funds to devote to debris removal, in the short-term as well as long term;
- e. A natural disaster that requires the removal of debris from public or private lands and waters could occur at any time;
- f. The amount of debris resulting from an event or disaster could exceed the local government's ability to dispose of it;
- g. If the natural disaster warrants, the Governor would declare a state of emergency that authorizes the use of State resources to assist in the removal and disposal of debris. In the event Federal resources are required, the Governor would request through FEMA a Presidential Disaster Declaration;
- h. Private contractors will play a significant role in the debris removal, collection, reduction, and disposal process;

- i. The debris management program implemented by the local government will be based on the waste management approach of reduction, reuse, reclamation, resource recovery, incineration and landfilling;
- j. Public Works and Park Services will operate under current FEMA Public Assistance (PA) Program guidelines for reimbursement as described in the Stafford Act. The Department should reevaluate provisions of this Plan should significant changes to the PA Program occur;
- k. In the event of a debris-generating incident exceeding Chatham County's ability to manage internally, Chatham County will activate one or more pre-event debris removal contractors;
- l. In the event of a debris-generating incident exceeding Public Works and Park Services ability to manage internally, Chatham County will activate pre-positioned monitoring contractors;
- m. If warranted, Chatham County will request State and Federal assistance through the County Emergency Operations Center (EOC).

D. Preparation and Readiness: It is imperative to maintain a constant state of preparedness throughout the year by reviewing and updating this Plan. The purpose of the review is to ensure all departments with debris responsibilities maintain the capacity to fulfill their obligations in a timely and effective manner should a disaster strike Chatham County. Once roles and responsibilities have been reviewed, updates to this Plan will be posted prior to hurricane season. The annual review/update of this Plan will include at a minimum:

- a. **Review Debris Guidance from CEMA, GEMA, and FEMA:** Rules and regulations dictating operational procedures change periodically; the information in this Plan will be updated as needed to reflect such changes.
- b. **Update Primary Debris Contact Lists:** The list of Debris Contacts will be updated as required to reflect changes in personnel or contact information. See **Attachment K**.
- c. **Review Jurisdictional Priorities:**
 - i. **Road Clearing Priorities:** Changes or updates relating to road segments and applicable maintenance responsibility among local, State and Federal agencies are critical for reimbursement through the PA Program and the Federal Highway Administration (FHWA) Emergency Response Program. It is critical the Department review and update priority road clearing lists and maps annually. Updated and accurate priority road clearing lists and maps will assist in documenting debris clearing/removal operations and thereby assist the Department during the reimbursement process.

- ii. **Critical Facility Restoration Priorities:** Critical Facilities compiled and shown on maps in possession of Chatham Emergency Management (CEMA). Changes or updates relating to Critical Facilities identified by Chatham County are critical for reimbursement through the PA Program. Updated and accurate Critical Facilities lists and maps will assist in documenting debris clearing/removal operations and thereby assist Chatham County during the reimbursement process.
- iii. **Review Pre-Event Debris Management Contracts:** During times of normalcy, Chatham County will establish and maintain pre-position contracts for debris monitoring and debris removal services. The procurement of such services will be compliant with established jurisdictional procurement practices, and the procurement competition requirements specified in Code of Federal Regulations, Title 44, Emergency Management and Assistance (44 CFR), Part 13.36. For additional guidelines regarding procurement, see FEMA Fact Sheet RP9580.201, Debris Contracting Guidance.
- d. **Review Debris Management Site (DMS) Locations:** Locations identified to serve as DMS following a debris-generating event will be approved by Chatham County to ensure compliance with DMS location standards and local zoning laws. These sites will be reviewed annually to ensure they remain viable options for DMS operations. Likewise, additional DMS locations may be identified as the development and landscape of Chatham County progresses over time.
- e. Coordinate with available landfill operators to ensure they will be in operations following a disaster and to ensure capacity for debris from a large scale event.

E. Debris Management Operations and Coordination:

- a. **General:** Chatham County's Debris Management Operations are accomplished by Public Works and Park Services Department. Debris management operations are generally divided into two phases, Response and Recovery. Personnel should document the critical decisions made in response to the disaster and provide the debris manager and local, State, and Federal officials with a clear action plan. The debris removal may extend for weeks or months, and the lack of documentation could cause stress and confusion between Public Works and other agencies involved in the clean-up.
- b. **Communications:**
 - i. Primary communication is the 800 MHz radio. Because there will be staff reassignments different from normal operations, identify a radio channel for all crews to monitor. Communication is to be limited and there is to be no chatter.

- ii. Secondary communication in order of hierarchy is cell phone, internet, texting, and “runners”.
 - iii. Crew Leaders communicate directly with the Division Coordinator on clean up efforts so accurate information can be distributed to the EOC and PIO.
- c. **Response Phase:** The Response Phase sometimes begins during, but always immediately after an event in order to gain access into the affected area. Actions required during the response phase are usually completed within a matter of days following a disaster event. The primary goals of debris operations during the Response Phase include but are not limited to: Emergency Roadway Clearing, Damage Assessment, and Estimating the Amount of Debris as outlined in Section IV.B.b.i.

i. **Resources:**

1. **Direct Federal Assistance (DFA):** In catastrophic events, DFA can be provided by FEMA to support local governments. It is important to remember, Chatham County’s response capabilities, along with those of the County and State must be exceeded before this request is made by CEMA to the SOC. The request is made by GEMA to FEMA if circumstances justify the need for DFA. FEMA Recovery Policy RP9523.9, 100% Funding for Direct Federal Assistance and Grant Assistance has been issued by FEMA to detail the requirements and scope for DFA, including provisions for funding at 100% Federal share for a limited period.
 2. **Render Safe Team (RST):** RSTs are jurisdiction based teams organized and equipped to initiate immediate re-entry back into the County from defined Critical Work Force (CWF) Shelter locations. See Section IV.B.b.i for description, objectives, Equipment and Supplies for the RSTs. Each RST has pre-defined re-entry routes, destinations, and priorities designed to ensure debris is initially pushed from critical transportation routes and priority critical facilities are assessed. County jurisdictions initially utilize their own labor force and equipment to staff RSTs during re-entry. It is plausible to expect jurisdictional RSTs to cross jurisdiction boundaries in support of a mission to ensure efficient and expeditious re-entry. In circumstances when the existing labor force is not sufficient, or when specialized services are required, work efforts may be supplemented by activating mutual aid agreements or by awarding short-term debris removal contracts for specific work
- ii. **Estimating the Amount of Debris:** Debris estimating is normally used in a post-disaster situation to establish a reasonable estimate of the actual debris

quantities and mix. Debris estimates will be used to establish debris removal priorities, DMS and landfill space requirements, and the possible need for contracted, State, and/or Federal resources. See **Attachment F** for formulas to assist in estimating debris volumes.

d. **Recovery Phase:** The Recovery Phase begins as emergency access routes are cleared and residents are returning to their homes where they begin to bring debris to the public ROW. At this time, Chatham County begins to collect, reduce, and dispose of the debris generated during the event utilizing the most cost-effective and environmentally responsible methods available. Depending on the quantity of debris generated by the event, and the complexity of the operations required to mitigate debris issues, debris management operations could continue for several months. Debris management activities will be handled at the lowest level possible based on the magnitude of the event. Requests for additional debris management resources (non-contract) will be made through the County EOC.

i. **Debris Collection Statement:** A fundamental component of this Plan is the collection of debris. The public expects to have debris removed from neighborhoods as soon as possible following a disaster event. The implementation of disaster debris collection as soon as practical after the disaster event assures the public that recovery efforts are in progress and that the community will return to normal quickly. Debris operations is under the direction and authority of the Debris Division Manager according to the Post Disaster Organization Chart shown on **Attachment M**.

ii. **Debris Collection Priorities:**

1. Clear debris from key roads in order to provide access for emergency vehicles and resources into the impacted area.
2. Resources will be assigned to provide access to critical facilities pre-identified and made available by the CEMA.
3. Elimination of debris related threats to public health and safety. This will include such issues as the repair, demolition, or barricading of heavily damaged facilities that pose a danger to the public.
4. Removal of debris on County routes starting with the primary routes progressing to secondary routes and then into individual neighborhoods. See **Attachment L** for maps for both Re-entry and collection during Recovery. Routes are pre-determined and strictly followed. Documentation should be kept of completed routes. Suggest using field maps transferred to digital mapping.

5. Debris from Recreational sites are low priority and should be managed by the collection crews and not specifically Park Maintenance staff.
- iii. **Curbside Collection:** Curbside Collection is similar to normal neighborhood garbage and trash collection operations. Residents are encouraged to keep debris separated to quicken the removal process and to meet local sanitary codes. During disasters operations, debris management is of critical importance. Independent contractors (ie. Tree contractors) working for a private entity or resident are encouraged to include contract provisions to deliver the debris directly to a disposal site versus leaving it in the ROW.
 1. The initial roadside debris piles created during emergency roadway clearing will quickly become the initial dumping location for residents bringing additional storm-generated debris from their properties to the public ROW. Previous events indicate this typically occurs in three stages, with the type(s) of debris changing during each stage. The three stages are:
 - a. Stage 1: Consists mainly of vegetation (woody debris and yard waste);
 - b. Stage 2: As residents begin to “clean house”, debris on the public ROW changes to household waste including damaged personal goods, white goods, electronic goods, household hazardous waste (HHW), trash and garbage. Residents should not mix garbage with debris. In order to be picked up and disposed of by County jurisdictions, the debris deposited at the curbside must be disaster related. Waste management services should resume normal garbage pick-up schedules as soon as possible;
 - c. Stage 3: When residents start the recovery process and initiate repairs, debris accumulated on public ROW begins to include construction and demolition materials removed by homeowners prior to the receipt of insurance and Grants through the FEMA Individual Assistance Program.
 - d. Construction and demolition materials from minor or major repairs or reconstruction generated by private contractors should not be deposited at the curbside. Contractors should remove and deposit the debris at approved collection locations and/or landfills. Insurance proceeds usually cover the cost for demolition debris removal from private property. It is also

important to watch for non-disaster related materials (bagged grass clippings, household garbage, automobile parts etc.). Chatham County will only be eligible for reimbursement for disaster-related debris removal costs not covered by insurance. Chatham County is not required to pick up ineligible items during recovery operations.

- e. **Source-Segregated Debris:** Collecting Source-Segregated Debris requires residents to sort 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 Collection Center or DMS. The disadvantage of this method is that it requires more trucks to collect the different types of debris; however, this increased equipment cost may be offset by avoiding the labor cost and time to separate the debris by hand. Collecting Source-Segregated Debris offers the potential of high salvage value and efficient recycling/reduction processing. This method is important when collecting hazardous and environmentally sensitive debris, such as HHW and White Goods.
 - f. **Collecting Household Hazardous Waste (HHW):** Items classified as HHW must be separated and **WILL NOT** be collected with other debris. HHW response teams may be sent ahead of the general collection effort to identify and remove HHW. Otherwise, individuals with material of this nature will be referred to the appropriate government agency and/or to qualified Hazardous Materials (HAZMAT) contractors.
2. **Private Communities:** Chatham County has agreements with Private Communities in accordance with local codes to provide Curbside Collection of yard waste and bulky items listed on **Attachment N**. Those Communities will be included in the Debris Collection process and all work should be eligible for reimbursements to the County.
- iv. **Private Property Debris Removal and Demolition of Private Structures:** Chatham County is responsible for removing debris from the public ROW. When large-scale disaster events cause mass destruction and generate large quantities of debris over vast areas, debris on private property may sometimes pose health and safety threats to the public-at-large. If private property owners are not available because they have evacuated, and **ONLY** when approved; Chatham County may enter private property and remove debris and/or demolish private

structures to mitigate situations considered to be an immediate threat to the lives, public health, and the safety of its residents. See **Attachment P** for an example Right of Entry/Hold Harmless Agreement.

v. **Debris Removal from Area Waterways:** Chatham County may be required to coordinate with the County EOC for the State and/or Federal agencies to ensure debris (including floundered watercraft) is removed from area waterways not within their authority, such as:

1. Georgia Department of Natural Resources (GADNR) for streams and waterways (non-navigable);
2. USCG for all navigable waterways; and
3. USACE for flood control debris issues.

vi. **Debris Management Sites (DMS):** A DMS is a location to temporarily store, reduce, segregate, and/or process debris before it is hauled to its final disposition. It is frequently used to increase the operational flexibility when landfill space is limited or when the landfill is not in close proximity to the debris removal area. In some situations, debris processing and final disposition will be accomplished at the same DMS location. It is anticipated that the operation and management of the DMS is the function of a contractor and the monitoring performed by a Debris Monitoring Contractor. The County will supplement with inspectors and other personnel as needed. County staff must receive and review all debris load tickets that have been verified by the Debris Monitoring Contractor.

1. Sites will be designated as **Chatham County Use Only**. These sites are reserved for Chatham County Public Works and Park Services use in order to store debris removed from County right of ways. **24 hour security will be provided** to eliminate illegal dumping of debris by citizens, also, this will provide a 24 hour fire watch who can contact the appropriate resource (nearest fire department) at the first sign of a fire. **It is imperative that records be kept** to provide accurate debris removal documentation.
2. Materials collected at the debris storage sites are to be segregated between vegetative debris, construction demolition debris, hazardous materials, and white goods.
3. Sites are as follows: and shown in **Attachment R:**

- a. Chevis Road Site (approx. 19.75 useable acres)

- b. Dillon Site (approx. 8.48 useable acres)
- c. Thomas Avenue Site (approx. 20.84 useable acres)
- d. Wilmington Island Landfill Site (approx. 16.06 useable acres)
- e. L. Scott Stell Park (approx. 33.35 useable acres)
- f. Island Expressway Boat Ramp (approx. 0.9 useable acre)
- g. Sharon Landfill (approx. 27.93 useable acres)
- h. Runaway Point Park (approx. 9.57 useable acres)
- i. Former Public Works, Sallie Mood Dr. (approx. 15.59 usable acres)

- vii. **Debris Volume Reduction:** Once debris is removed from the damaged areas, it will be taken to the DMS to be reduced and/or prepared for disposal. Preparations must be made for the DMS to work with/process numerous types of debris including construction and demolition (C&D), Trees, Stumps, Limbs, Leaves, Metals, White/Electronic Goods, Household Waste, and other HAZMAT. Chipping and grinding operations may be utilized to reduce vegetation and other materials; out-source HAZMAT clean-up to appropriate, certified, disposal companies; use air curtain destruction methods, and use available resources to recycle materials that are recyclable.
- viii. **Final Disposition:** Debris plans must include final disposition sites of their whole, reduced, and/or recycled debris. The most cost-efficient measure is usually to make use current approved landfills within the jurisdiction. Available remaining space at these established landfills may not be adequate and other disposal locations will have to be located.
- ix. **Health and Safety:** Chatham County complies with all Department of Health and Environmental Control requirements to maintain and ensure the highest quality of health and safety standards for its residents. In addition, Information will be disseminated to the public regarding basic health and safety issues as necessary.