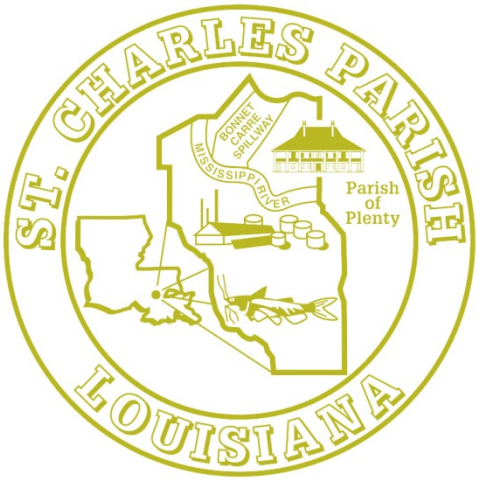
St. Charles Parish

Disaster Debris Management Plan



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Section 1
Introduction

This Debris Management Plan (DMP) identifies the actions required to plan for and respond to a natural or man-made debris-generating event. It is designed to identify local, State and Federal agencies responsible for debris operations with respect to executing a coordinated response to a major debris-generating event that impacts St. Charles Parish.

St. Charles Parish recognizes the need for close coordination between local, State and Federal agencies identified in this Plan. Therefore, St. Charles Parish has designated the Contract Monitor as the Debris Manager.

The Debris Manager will direct and coordinate Debris Clearing Operations (Phase I) and Debris Removal and Disposal Operations (Phase II) utilizing force account personnel and equipment and/or private contractors to manage the overall debris cleanup operations.

The Debris Manager will be responsible for coordinating disaster debris operations with respect to the emergency clearance, permanent removal and disposal of debris deposited along or immediately adjacent to St. Charles Parish maintained Rights-of-Way (ROWs) in consultation with other Parish departments, contractors, State and Federal agencies. This approach will ensure a seamless and efficient cleanup operation.

The use of Force Account Labor (FAL) and Equipment (FAE) will be determined on a case-by-case basis. Based on the severity of the event, a decision to use FAL/FAE for debris removal and/or debris monitoring will be made immediately following the event. This decision will be based on the amount of debris determined that can be effectively removed using FAL/FAE, available at the time of the event. Whenever possible, St. Charles Parish will utilize its employees and equipment to manage and perform debris removal work. In either case, the use of FAL and/or FAE or the use of contract forces, an estimate of debris will be quantified.

Section 2
Roles and Responsibilities

The St. Charles Parish Contract Monitor's Office is responsible for coordinating the debris removal function. The Contract Monitor's Office 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. The Contract Monitor administers the contract for removing debris from the public ROWs. Only when pre-approved, and it is deemed in the public interest, will St. Charles Parish have its debris contractor remove debris from private property. The Contract Monitor will ensure that equipment is staged in strategic locations locally as well as regionally, if necessary, to protect the equipment from damage and to allow for the clearing crews to begin work immediately after the disaster.

Due to the magnitude and the widespread destruction and displacement of citizens from natural disasters such as hurricanes, St. Charles Parish does not have the staff, equipment, and funds to respond to the debris removal and disposition effort in the short- term, as well as the long-term. For this reason, St. Charles Parish depends on outside resources to assist in the debris removal function for any federally declared disaster event. Because of the limited quantity of resources and service commitments following the disaster, St. Charles Parish will be relying heavily on private contractors to remove, collect, and manage debris for reuse, resource recovery, reduction, and disposal. Using private contractors instead of government workers in debris removal activities has a number of benefits. It shifts the burden of conducting the work from the Parish's limited staff to the private sector, and frees up government personnel to devote more time to their other recovery efforts, as well as regularly assigned duties. Private contracting also stimulates local, regional, and State economies impacted by the storm, as well as maximizes State and local governments' level of financial assistance from the Federal government. Private contracting allows the State and its political subdivisions to more closely tailor their contract services to their specific needs. The entire process (i.e., clearance, collection, transporting, reduction, disposal, etc.) or segments of the process can be contracted out.

Due to St. Charles Parish's limited resources, the Parish is relying on Federal and State agencies to play critical roles in the process. Each level of government will work together to fulfill their obligations in the funding, removal, collection, and management of the debris and other waste materials.

2.1 FEDERAL

The Federal Emergency Management Agency (FEMA) has the lead for the Federal response to federally declared disasters. FEMA is the financial and approval lead for all mission tasks. Other federal agencies that are invested with varying authorities for debris management activities include the U.S. Department of Homeland Security, the U.S. Army Corps of Engineers (USACE), the Federal Highway Administration, the U.S. Environmental Protection Agency (USEPA), the U.S. Coast Guard (USCG), and the Departments of Agriculture, Commerce, and Transportation. The Robert T. Stafford Emergency Relief and Disaster Assistance Act (PL 03-288, as amended and referred to the Stafford Act) is the federal legislation that created a national program for disaster preparedness, response, recovery, and mitigation. This Act constitutes the statutory authority for most federal disaster response activities, especially as they pertain to FEMA and FEMA programs.

2.2 STATE

The two major roles of the State of Louisiana in the debris management process are the interface between St. Charles Parish and FEMA, and the approval of solid waste storage, processing, reduction and/or disposal sites in the State. As the coordinator with FEMA, the State has a major role in defining the scope of the recovery effort. As the permitting agency, the State has the major oversight in the debris management and planning.

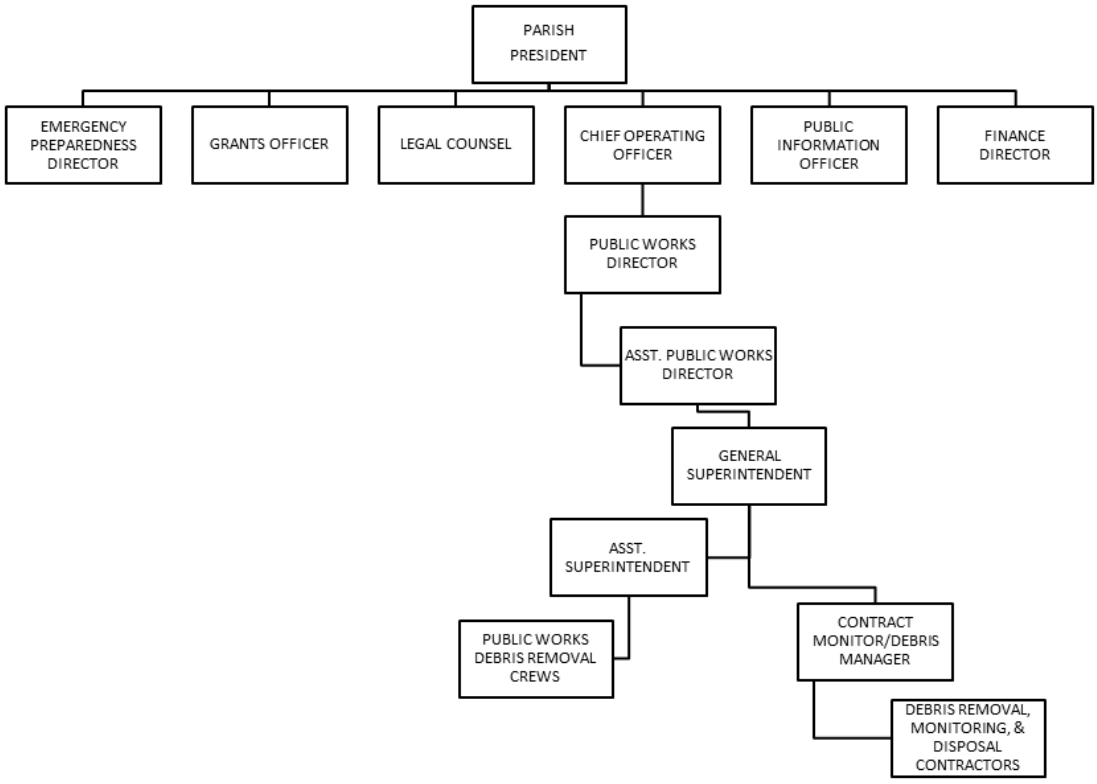
2.3 ST. CHARLES PARISH

St. Charles Parish has a critical role in the debris management process. The Parish initiates the public assistance request through the State to FEMA. In the debris removal and disposal process, St. Charles Parish is responsible for identifying landfills, temporary debris staging and reduction sites (TDSRS) and any other methodology for the final destination of the debris. The Parish is also responsible for providing the Rights-of-Entry (ROE), as may be required for the removal and disposal of debris and other waste materials from private property. The Parish also is responsible for prioritizing areas for debris removal. A Jurisdictional Map of St. Charles Parish is included in Appendix A.

2.3.1 Staffing Organizational Chart

The purpose of this section is to provide a structured approach to debris management operations. The size of the debris management operations is dependent upon the magnitude of the disaster as well as the geographic size of the area. An organizational chart that breaks down St. Charles Parish's debris management operations is provided as Figure 2-1.

Figure 2-1 - St. Charles Parish's Debris Management Organizational Chart



2.3.2 Staffing Roles and Responsibilities

Parish President:

The Parish President will oversee the Debris Management Staff during the event directing overall recovery activities and prioritization.

Emergency Preparedness Director:

The Emergency Preparedness Director is responsible for the coordination of the Parish's overall disaster recovery efforts.

Chief Operating Officer, Public Works Director, Assistant Public Works Director, & General Superintendent:

The Chief Operating Officer, Public Works Director, Assistant Public Works Director, and General Superintendent have responsibility for supervising the Assistant Superintendent and Debris Manager, as well as:

- Oversight of and assisting with procurement of debris removal, monitoring, and disposal contractors.
- Evaluating options for recycling/reducing/disposing debris.
- Evaluating/selecting locations for TDSR sites.
- Assisting with execution of debris removal operations as needed to ensure the recovery effort is completed in a timely manner.

Debris Manager:

The Contract Monitor/Debris Manager has direct responsibility for the debris removal operations including directing removal, monitoring, and disposal contractors.

- Implementing the debris management plan.
- Interfacing with contractor's representatives.
- Conducting debris assessments.
- Developing debris removal priorities.
- Developing strategies for debris removal.
- Communicating with Parish staff and Council.
- Determining monitoring and reporting requirements.
- Securing all authorizations necessary for debris removal activities.

The Contract Monitor/Debris Manager assists with debris removal, monitoring, and disposal contracts and procurement related duties which include but are not limited to:

- Setting bidding requirements.
- Developing forms.
- Advertising for bids.
- Instructing bidders.
- Developing contracts.
- Documenting all costs for debris removal activities.

The Contract Monitor/Debris Manager also is responsible for environmental compliance related tasks that may include but not limited to:

- Coordinating with State and Federal agencies, such as USEPA, LDEQ, and the Louisiana Historic Preservation Office to ensure compliance with environmental and historic preservation laws/regulations/policies.
- Determining environmental monitoring and reporting requirements for TDSR sites.
- Maintaining records for historical purposes.

The Contractors' roles include but are not limited to:

- Removing debris from public property and FEMA approved private property.
- Tracking and measuring of debris.
- Ensuring all debris is transported to the appropriate TDSR sites or permitted waste facilities safely.
- Ensuring only approved waste products are being picked up.
- Managing and monitoring operations at the TDSR sites.
- Operating debris reduction sites.

Assistant Superintendent:

The Assistant Superintendent is responsible for the oversight of Public Works Debris Removal Crews and equipment, should the Parish decide to use Force Account Labor (FAL) and Equipment (FAE) for debris removal and/or debris monitoring.

Public Works Debris Removal Crews:

Public Works Debris Removal Crews, if needed, utilize Parish owned equipment to provide emergency clearance, permanent removal, and disposal of debris deposited along or immediately adjacent to St. Charles Parish maintained ROWs.

Public Information Officer:

The Public Information Officer is responsible for providing information and guidance to the public regarding parish conditions and activities including debris removal. Informational bulletins, hotline responses, radio and television announcements, handbills and door hangers, newspaper notices, Facebook and other internet blogs will be used to disseminate information. The Public Information Officer will coordinate with the Contract Monitor/Debris Manager to disseminate accurate and timely information to the public.

Typical information that can help expedite the cleanup process includes:

- Segregating hazardous waste.
- Placing debris at the curbside.
- Keeping debris piles away from fire hydrants and utility valves.
- Segregating recyclable materials.
- Reporting illegal dumping.

The public will be well informed on debris removal activities, such as:

- Debris pickup schedules.
- Disposal methods and compliance with the State DEQ and Environmental Protections Agency regulations.
- Restrictions and penalties for illegal dumps.

Legal Counsel:

The Legal Department responsibilities include but are not limited to:

- Assisting with the development of and reviewing all contracts.
- Reviewing Rights-of-Entry and hold harmless agreements.
- Reviewing private property insurance information and other assets to ensure benefits and resources are fully utilized.

Finance Director:

The Finance Director is responsible for making sure funds are available for equipment, supplies, and all other expenses. The Finance Department's duties include but are not limited to:

- Keeping records of financial transactions for reimbursement of debris removal activities.
- Funding of debris removal activities.
- Maintaining records for historical purposes.

Grants Officer:

The Grants Officer is responsible for coordinating with Federal and State agencies, such as FEMA and the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP). The Grants Officer's duties include:

- Serving as the Parish's liaison with GOHSEP and FEMA for all Public Assistance Program matters, including debris removal.
- Obtaining reimbursement for debris removal operations expenditures through FEMA's Public Assistance Program.
- Ensuring compliance with laws/regulations/policies.
- Assists with debris removal, monitoring, and disposal contracts and procurement related duties.
- Maintaining records for historical purposes.

2.3.3 Emergency Communications Plan

Communications is advance of and immediately following the disaster will comply with preexisting telephone or other emergency "Call Out" notification procedures established for each office and department within our government.

2.3.4 Health and Safety Strategy and Procedures

The health and safety of St. Charles Parish's citizens, the disaster response team, and the debris management team are of paramount importance. Managing the safe execution of the debris management mission is a responsibility of all involved. Contractors will be required to comply with all Federal, State, and local regulations.

2.3.5 Training Schedule

Having spent the last several years working on disaster response and debris removal on hurricane related projects, St. Charles Parish's staff is experienced in all debris removal activities. Parish staff regularly attend FEMA and State sponsored training sessions and conferences to keep current with the latest regulations and policies.

2.3.6 Environmental Requirements

Following a disaster event, compliance with environmental protection laws and regulations is required. Federal and State Environmental Protection Agencies (USEPA) including, but not limited to, State Department of Environmental Quality (LDEQ) and local Health Departments will be consulted for applicable regulatory requirements.

All debris-related activities will be coordinated with Federal, State and local agencies, including, but not limited to, USEPA and the Historic Preservation Office to ensure compliance with environmental and historic preservation laws/regulations/policies and determining environmental monitoring and reporting requirements for Debris Management Sites (DMS).

Section 3
Situation and Assumptions

3.1 SITUATION

Natural disasters such as hurricanes, tornadoes and flooding precipitate a variety of debris that includes, but is not limited to, such things as trees and other vegetative organic matter, building /construction material, appliances, personal property, mud and sediment.

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. This plan is based on the debris generating capacity of a Category 3 Hurricane with sustained wind speeds up to 130 miles per hour and heavy rainfall.

A Category 3 Hurricane will cause extensive damage to large trees and shrubs in addition to substantial structural damage to homes and commercial property. Mobile homes will be destroyed.

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 removal and disposal methods utilized to address the debris problem, associated costs incurred, and how quickly the problem can be addressed.

3.2 ASSUMPTIONS

1. A major natural disaster that requires the removal of debris from public or private lands and waters could occur at any time.

2. The amount of debris resulting from a major natural disaster probably will exceed the St. Charles Parish's removal and disposal capabilities.

3. St. Charles Parish will contract for additional resources to assist in the debris removal, reduction, and disposal process.

4. The Governor will declare a State of Emergency that will authorize State resources to assist in removal and disposal of debris.

5. The Governor will request a Presidential Disaster Declaration, if the disaster exceeds both local and State resources.

3.3 DESIGN DISASTER EVENT

Debris quantities are estimated using the following procedure:

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	
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, St. Charles Parish will require temporary staging 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, 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. Given the location of St. Charles Parish with respect to the coast, the Parish estimates that its largest debris generating event would be a Category 3 hurricane. Therefore, under the worst scenario, e.g., a Category 3 hurricane, heavy vegetation cover, heavy commercial density, and heavy precipitation, the amount of acres needed for a temporary landfill is 115 acres. The calculation (assuming St. Charles Parish's estimated population of 52,780) is as follows:

Q = H(C)(V)(B)(S)
Q = 17,593 x 26 x 1.5 x 1.3 x 1.3
Q = 1,159,555 cy of debris.

1,159,555 (cy of debris / 16,133 (cy/ac) = 71.9 acres of debris.
71.9 acres x 1.6 (60% more area needed for roads, etc.) = 115 acres.

The debris shall be: 1) removed from St. Charles Parish ROWs by FAL and temporarily staged at St. Charles Parish's TDSR sites, then removed from the TDSR sites by the debris removal contractor and transported to St. Charles Parish's DMS for reduction and disposal; or 2) removed from St. Charles Parish ROWs and transported by the debris removal contractor directly to St. Charles Parish's DMS for reduction and disposal, so that the existing sites are of sufficient size.

3.4 FORECASTED DEBRIS

3.4.1 Forecasted Types

To facilitate the debris management process, debris will be segregated by type. It is recommended that the categories of debris established for recovery operations be standardized. St. Charles Parish will adopt the categories established for recovery operations by the U.S. Army Corps of Engineers (USACE) following Hurricane Andrew. Debris removed will consist of two broad categories (clean) wood debris and construction and demolition (C&D) debris. Most common hurricane-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.

3.4.2 Forecasted Locations

The locations of debris can be forecasted to some extent based on topography and land use. The relative debris amounts per area are dependent on the path of the storm and wind field. A storm tracking to the east of St. Charles Parish will affect different areas and generate much different quantities than a storm to the west side. Generally, storms that pass on the west side of St. Charles Parish will have a more devastating effect than those passing to the east. The extent of flood damage is largely dependent on how the winds push water into and over the coastal wetlands, the speed of the storm (the slower, the tendency for more flooding), and the amount of rain generated by the storm as it passes through.

Section 4
Debris Collection Plan

4.1 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. The first priority for St. Charles Parish is to clear dead end streets where residents may be trapped without access to supplies or medical attention. To achieve this objective, St. Charles Parish response operations personnel, including Public Works Debris Removal Crews, the Sheriff's Department, the Fire Department, and contracted personnel, begin by clearing debris from key roads in order to provide access for emergency vehicles and resources into the impacted area. In the course of roadway clearing, dead end streets are cleared as they are reached by the roadway clearing team. Once major roadways are cleared of debris, the roadway clearing focus shifts to secondary and residential streets.

The need and demand for critical services will be increased significantly following a disaster. Following the key road and dead end street clearing, the next priority that debris removal resources will be assigned is providing access to critical facilities pre-identified by State and local governments. Critical facilities in St. Charles Parish include supply staging areas and distribution points, assistance shelters, St. Charles Parish Hospital, government buildings, and other publicly owned facilities.

The next 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.

Priority for debris clearance also will be based upon the following criteria:

- Extricate people
- Major flood drainage arteries
- Egress for fire, police, and Emergency Operations Center
- Fire, Police and Municipal Buildings
- Ingress to hospitals, jail, and special care unit
- Major traffic routes
- Egress for fleet, traffic, road and bridge, and designated remote locations
- Supply distribution points and mutual aid assembly areas

- Government facilities
- Public Safety communications towers
- Shelters
- Secondary roads to neighborhood collection points
- Access for utility restoration
- Neighborhood streets
- Private property adversely affecting public welfare

4.2 RESPONSE OPERATIONS

The first phase of debris management response is debris clearance operations to clear debris from roadways. St. Charles Parish response operations personnel include Public Works Debris Removal Crews, the Sheriff's Department, the Fire Department, and contracted personnel. This response team works together to clear the roadways by cutting and moving debris to the edge of the roadway. Although technically it is the Federal Highway Administration's and the Louisiana Department of Transportation and Development's duty to clear Federal and State highways respectively after a debris-generating event, St. Charles Parish's response team cannot and does not wait on their assistance because these roadway's comprise some of the primary access routes to and from St. Charles Parish. They also serve to provide Parish residents with access to medical facilities.

The Debris Manager is the lead person responsible for coordinating impact assessment for debris clearance immediately following a large scale disaster in order to prioritize the impacted areas and resource needs. Initial zone-by-zone windshield surveys are performed to identify the type of debris and to estimate amounts of debris so that a scope of work can be generated for the debris management contract.

4.3 RECOVERY OPERATIONS

The second phase of debris management operations is the removal of debris from the public ROW.

As the major storm event approaches St. Charles Parish, the Debris Manager will be in contact with the pre-qualified contractor firms which will be called to execute Disaster Debris Removal, Reduction, Recycling and Disposal Contracts to advise them of impending conditions. This contract is designed to remove and lawfully dispose of all natural disaster generated debris, and hazardous materials. Debris removal will be limited to St. Charles Parish streets, roads and other ROWs, all government properties, and any other government facility or site as may be directed, and includes all private residence and property debris brought to the edge of the ROW by citizens.

Debris is simply pushed to the shoulders of the roadway during the emergency opening (Phase I) of key routes. There is little time or concern for sorting debris at that time. The objective is to provide for the safe movement of emergency and support vehicles into and out of the disaster area. As removal operations progress, the initial road side piles of debris become the dumping location for additional yard waste and other storm generated debris such as construction material, personal property, trash, white goods (refrigerators, washers, dryers, hot water heaters, etc.), roofing, and even household, commercial, and agricultural chemicals. Obtaining good estimates of debris volumes facilitate efficient debris removal, reduction and disposal work during this phase of operations.

Expedient removal of debris from in front of residents' homes should become a priority since it is a positive sign that restoration actions are underway and may help counteract depression and helplessness of the affected residents. The removal operations will also assist in expediting the replacement of key utilities located along public ROW.

Specific actions may include:

- Assigning Parish staff to debris hauling assistance
- Activating debris removal contracts
- Debris collection and removal
- Opening of TDSR sites
- Establishing residential debris drop sites
- Communicating curbside sorting instructions to the citizens

4.3.1 Collection Method

The general concept of disaster debris removal operations developed by St. Charles Parish includes multiple, scheduled passes of each site, location or ROW. This manner of debris removal allows citizens the opportunity to return to their properties and subsequently bring all debris to the edge of the ROW for removal, as property restoration progresses.

4.3.1.1 Curbside Collection

The Louisiana Department of Transportation and Development (LDOTD) is responsible for debris removal for the ROW of State and Federal highways, respectively. Therefore, after the Phase I roadway clearing operations move the debris from the highways to the ROW, the debris is left for the pickup and disposal by LDOTD.

For debris on St. Charles Parish-owned ROW, the Parish mobilizes its pre-positioned debris contractor and FAL/FAE to remove, reduce, recycle and properly dispose of the debris. The debris contractor and Parish FAL/FAE first stack the vegetative debris into piles along the ROW, and then load the piled debris onto trucks for transport to the TDSRS or DMS.

For curbside collection, residents are required to sort their waste during placement at curbside. The debris contractor takes all vegetative and C&D debris to St. Charles Parish's DMS for sorting and reduction. Mixed waste is transported directly to the pre-qualified and contracted Landfill. Hazardous waste is collected by specialized crews and either transported to the USEPA hazardous waste staging site or directly to the pre-qualified and contracted Landfill, if it has facilities to handle hazardous waste onsite. Maps depicting the location of the pre-qualified and contracted Landfill DMS and St. Charles Parish's TDSR sites are included in Appendix B.

4.3.2 Monitoring Staff and Assignments

The debris monitoring consultant is a third-party, objective, oversight agency acting as an extension of our staff to ensure that debris removal, reduction, and disposal activities are conducted in a manner consistent with FEMA rules and regulations. The monitoring firm will only be engaged upon activation of our contracted debris hauling firm.

The monitoring firm will orient employees with operational procedures and refresh staff with a field training program on current debris removal eligibility, FEMA eligibility requirements, debris removal contract requirements, and safety procedures. Collection monitors must carefully document debris collection information to demonstrate eligibility and ensure proper debris hauling contractor payments and FEMA reimbursement. The debris monitoring firm may be responsible for the following activities:

- Issuing load tickets
- Verifying the amount of debris hauled to the TDSRS and DMS
- Identifying household hazardous waste (HHW) in the ROW and at
- TDSR sites and ensuring that it is properly segregated, and disposed of at a licensed facility
- Managing an extensive database for reimbursement, invoice reconciliation and auditing purposes
- Reviewing and reconciling contractor invoices prior to recommending payments to St. Charles Parish

An example Load Ticket, Debris Monitor Report, and Truck Certification Form are provided in Appendix C.

Section 5
Debris Management Sites

5.1 SITE PLANNING & ESTABLISHMENT

St. Charles Parish utilizes only LDEQ pre-approved DMS within or in close proximity of the Parish for the sole purpose of the reduction and disposal of vegetative and construction & demolition (C&D) debris. Based on its past experience, St. Charles Parish anticipates that this site will be the only DMS needed. A map depicting the location of St. Charles Parish's DMS is included in Appendix B.

5.2 SITE OPERATIONS

Any hazardous and industrial materials encountered by the debris removal contractor are to be set aside at the point of collection for removal and disposal by the specialized debris crews. These debris crews will transport the materials directly to a staging area established by the USEPA or directly to the pre-qualified and contracted Landfill, if it has facilities to handle hazardous waste onsite. Any hazardous and industrial material arriving at the DMS should be contained in the specially designed lined area until removed for disposal.

5.2.1 Site Preparation

The topography and soil/substrate conditions should be evaluated to determine best site layout. When planning site preparation, think of ways to make restoration easier. For example, the topsoil can be scraped and stockpiled in perimeter berms. Upon site closeout, the uncontaminated soil can be spread to preserve the integrity of the tillable soils. The following site baseline data checklist should be used to evaluate a site before a contractor begins operations and used during and after to ensure that site conditions are properly documented.

Site preparation activities include:

- Developing a site management plan following FEMA Publication 325
- Maintaining flag-persons and traffic control signage as needed to ensure safe traffic flow
- Ensuring that the contractor's site health and safety plan is followed
- Providing portable toilets (male and female)
- Providing an all-weather inspection tower
- Providing dust suppression equipment

5.2.2 Debris Reduction

Debris Reduction options include:

- Air Curtain Incineration of clean vegetative debris
- Open Burning of clean vegetative debris
- Grinding vegetative and C&D debris

5.2.3 Recycling

Recycling reduces mixed debris volume before it is hauled to a landfill. Recycling is attractive since there may be an economic value to the recovered material if it can be sorted and sold. Metals, wood, and soils are prime candidates for recycling. Most of the non-ferrous metals are suitable for recycling. Specialized contractors are available to bid on disposal of debris by recycling if it is well sorted.

5.2.4 Environmental Considerations

Stockpiled debris will be a mix of woody vegetation, construction material, household items, and yard waste. Household hazardous waste (HHW) and medical wastes should be segregated and removed prior to stockpiling. These wastes are transported in accordance with applicable regulations by a specialized contracted debris crew. Activities at the debris disposal sites will include the following activities: stockpiling, sorting, recycling, burning, grinding, and chipping. Burning typically is done in pits and only woody debris is burned; however, the efficiency of the burn and the quality of burn material may be variable.

5.2.5 Site Closeout

Each temporary debris staging and reduction site will eventually be emptied of all material and be restored to its previous condition and use. Contractors would be required to remove and dispose of debris residue at approved landfills. Quality Assurance (QA) inspectors should monitor all closeout and disposal activities to ensure that contractors complied with contract specifications. The basic close-out steps required are: remove all debris from the site; conduct an environmental audit/assessment; develop a remediation/ restoration plan, approved by the appropriate environmental agency; execute the plan; get acceptance from the landowner; and terminate lease payments, if applicable.

Section 6
Contracted Services

6.1 EMERGENCY CONTRACTING/PROCUREMENT PROCEDURES

St. Charles Parish will implement Emergency Contracting/Procurement Procedures to facilitate faster delivery of necessary goods and services to the disaster response. These procedures will be utilized in the event that pre-positioned debris management contracts are not in effect at the time of the disaster.

Once the extent of damage is accessed, the Debris Manager or a St. Charles Parish consultant will draft a debris removal and disposal contract and bid documents. The draft contract and bid documents are provided to the Parish Legal Counsel for review. Once the review is complete, an emergency bid is conducted in accordance with the Louisiana Public Bid Law. The bid is advertised on three occasions in the official journal of St. Charles Parish.

The Debris Manager conducts a pre-bid meeting with potential bidders and also issues the contractor's notice to proceed once the contract is awarded. The Parish President signs the contract, and it is then ratified by the St. Charles Parish Council at the next council meeting.

6.2 DEBRIS OPERATIONS TO BE OUTSOURCED

Following the Phase I roadway clearance operations, all subsequent debris management functions may be outsourced to consultants and contractors. Such contracted activities include debris removal, processing and disposal, TDSR site operations, and monitoring. St. Charles Parish's Finance Department tracks the costs of these activities, which are paid out of the Parish's budget until it is depleted.

Debris management requirements not covered by a pre-positioned debris removal contract, debris monitoring contract, or hazardous waste disposal contract will be accomplished using Force Account Labor (FAL) or procured using Emergency Contracting/Procurement Procedures. Any force account work that is conducted by St. Charles Parish is tracked by the Department of Public Works.

6.3 GENERAL CONTRACT PROVISIONS

General Contract Provisions and contract format for any new procurement action will comply with the guidelines and recommendations as published in Chapter 2 of FEMA 325, Public Assistance Debris Management Guide.

Sample contracts with a menu of services and generic scopes of work will be developed by the Department of Public Works and reviewed by Legal Counsel prior to the disaster to allow St. Charles Parish to more closely tailor its contracts to its needs, as well as expedite their implementation in a prompt and effective manner. At this time, St. Charles Parish will use its past debris management contracts to serve as a basis for drafting future debris management contracts.

The Debris Manager and the debris monitoring consultant will be responsible for managing the debris contract from project inception to completion. Managing the debris contract includes such things as monitoring of performance, contract modifications, inspections, acceptance, payment, and closing out of activities.

The three types of contracts that St. Charles Parish may use for debris management activities are as follows:

1. Time and Materials Contract. Will be limited to the first 70 hours of operation and only after all State and local equipment has been committed. The price for equipment applies only when the equipment is operating. St. Charles Parish can terminate the contract at its convenience and these contracts do not guarantee a minimum number of hours.

2. Lump Sum Contract. The price of the work is fixed unless there is a change in the scope of work to be performed. Lump sum contracts will be calculated on either the "area" method or the "pass" method. The lump sum contract shall only be used when the scope of work is clearly defined and the areas of work can be specifically quantified.

3. The Unit Price Contract. This type of contract is most typically used by St. Charles Parish for its debris management function. Unit price contracts provide the most accurate account of actual quantities removed. This contact type requires that field inspectors monitor the contractor's work to eliminate contractor fraud. All contractor trucks must be measured. Requires load tickets identifying truck number, contract number, contractor's name, date, time departed site, and estimated volume.

6.4 QUALIFICATION REQUIREMENTS

The Contractor's experience with debris management, response record, availability of resources, and financial solvency are considered during the St. Charles Parish's contractor prequalification process. A list of pre-qualified debris management Contractors currently under contract with St. Charles Parish is included in Appendix D.

Debris Removal, Processing, and Disposal Operations:

The Contractors for debris removal and processing and disposal operations were pre-qualified based on an evaluation of qualification packets solicited and received from the interested contractors. St. Charles Parish will solicit more current qualification packets as needed.

Debris Monitoring:

Debris monitoring will be required if contractors are used in the debris operation. There are two (2) basic purposes of debris monitoring: 1) to verify that work completed by the contractor is within the contract scope of work; and 2) to provide the required documentation for Federal grant reimbursement. The primary role for Debris Monitors is to document the type, location and amount of debris collected. Debris Monitors are concerned with documenting debris at three (3) stages:

- Debris collected from Collection Centers and/or curbside;
- Debris accepted at Debris Management Sites (DMS) and/or final disposition (landfills or Resource Recovery Centers); and
- Debris reduced/recycled at DMSs and taken to final disposition.

Debris Monitors are also responsible for documenting any operational or safety issues that might arise. In some cases, debris monitoring will also be required for local government FAL. The Disaster Debris Manager will make the determination about the need for regular monitoring by contract monitors or local FAL. This determination will be based primarily on:

a) Incident circumstances (e.g., nature, scope, magnitude, severity and anticipated duration of the incident);

b) Federal requirements (as specified by FEMA policy and guidance); and,

c) the possibility that fraudulent reporting practices could occur.

The Contractor for debris monitoring operations was pre-qualified based on an evaluation of qualification packets solicited and received from the interested contractors. St. Charles Parish will solicit more current qualification packets as needed.

6.5 SOLICITATION OF CONTRACTORS

Solicitation of Contractors will be accomplished in a full, fair, and open competition as discussed in Chapter 2 of FEMA 325, Public Assistance Debris Management Guide.

6.6 MUTUAL AID AGREEMENTS

Through the State of Louisiana's Web EOC, St. Charles Parish has entered into cooperative agreements with other State agencies and local governments to maximize public assets. The development of such agreements must comply with the guidelines established in their agency procurement manual. All State agencies and local governments that wish to participate in such agreements should be identified prior to the development and implementation of the agreement.

Section 7
Private Property Demolition and Debris Removal

Under certain circumstances, and in accordance with State and St. Charles Parish law, St. Charles Parish may enter onto private property to remove debris. When possible, the Parish will obtain a Right-of-Entry Agreement from the property owner. If the property owner is unavailable, and the Parish determines it to be absolutely necessary to enter upon private property to remove debris, the Parish President and/or Parish Council may authorize its staff or contractor(s) to perform the necessary debris removal.

7.1 CONDEMNATION CRITERIA AND PROCEDURES

Dangerous structures should be the responsibility of the owner to demolish in order to protect the health and safety of adjacent residents. However, experience has shown that unsafe structures may remain because of the lack of insurance or absentee landlords. Care must be exercised to ensure that St. Charles Parish properly identifies such structures. The Debris Manager will coordinate with the Parish Administration regarding:

- Demolition of private structures.
- Removing debris from private property.
- Local law and/or code enforcement agencies.
- Historic and archaeological sites.
- Qualified environmental contractors to remove hazardous waste such as asbestos and lead based paint.
- Abandoned vehicles.
- Receipt of Right-of-Entry Agreements with landowners.

7.1.1 Legal Documentation

Communities in disaster-prone areas should have copies of required ordinances as part of their local emergency management plan. The ordinances should be activated when a State of Emergency is declared, eliminating any unnecessary waiting period. All of these actions should be accomplished prior to a disaster. Demolition of private property will present significant coordination problems. The checklist shown below identifies key tasks that local officials should perform before the structure is approved for demolition. To expedite the overall effort, many of the tasks should be conducted concurrently.

Private Property Documentation Checklist:

- Obtain copies of all ordinances that authorize the community to condemn privately owned structures. The authority to condemn privately owned structures might be different from the authority for the demolition of publicly owned structures.
- Coordinate use of adjacent lands, easements and ROW necessary for accomplishing the approved work.
- Implement laws that reduce the time it takes to go from condemnation to demolition.
- Obtain copies of all applicable permits required for demolition of subject structure(s).
- Document the age of the structure to determine if eligible or on the National
- Registration of Historic Places with the state historic preservation office.
- Obtain copies of pertinent temporary well-capping standards.
- Obtain executed ROE and hold harmless agreements that have been signed by the owner and by renter, if rented. ROE should indicate any known intent by owner to rebuild to ensure foundation and utilities are not damaged. If these agreements are not executed, document reason(s).
- Use radio, public meetings, and newspaper ads to give notice to property owners and their renters to remove personal property in advance of demolition.
- Document name of owner on the title, the complete address and legal description of the property and the source of this information. Document name of renter, if available.
- Ensure property will be vacated by demolition date.
- Provide written notice to property owners that clearly and completely describe the structures designated for demolition. Additionally, provide a list that identifies related structures, trees, shrubs, fences and other items to remain on the respective property.
- Notify mortgagor of record.
- Provide the property owner the opportunity to participate in the decision on whether the property can be repaired.
- Determine the existence and amount of insurance on the property prior to demolition.
- Specify procedures to determine when cleanup of a property is completed.

7.1.2 Demolition Permitting

Private Property Demolition:

Although flood insurance policies do not provide coverage for debris removal, most homeowner, fire, and extended coverage insurance policies have specific coverage for debris removal from private property and for demolition of heavily damaged structures. Demolishing or securing remaining structures that threaten the health and safety of adjacent residents should be the responsibility of the owner or local government; however, experience has shown that unsafe structures will remain because of lack of insurance, absentee landlords, or understaffed and under-equipped local governments. Consequently, ensuring the demolition of these structures may become the responsibility of the local

designated debris manager and staff, which requires complete cooperation of numerous local and State government officials and may require resources from any or all of the following:

- Tax office.
- Local law and/or code enforcement agencies.
- State Historic Preservation Office.
- Environmental contractors qualified to remove asbestos and lead-based paint.
- Field teams to photograph and document the sites before and after demolition.

Health and safety program requirements contained in 29 CFR should be adhered to with respect to hazardous waste. When removing any suspected hazardous waste, workers should only work in well-ventilated areas, wear chemical protective clothing, and evacuate the area if a chemical is noticed.

7.1.3 Inspections

Inspections are performed in accordance with the Private Property Inspection Checklist listed below:

- Coordinate all pertinent site inspections with local, State and Federal inspection team(s).
- Identify asbestos and lead-based paint materials prior to demolition. Notify the owner and/or renter of all site inspections.
- Verify that all personal property has been removed from private structure(s).
- Immediately prior to demolition, verify that the building is unoccupied.
- Ensure that the property is properly posted.
- Obtain a clear, concise and accurate property description and demolition verification.
- Include a Public Health official on the demolition inspection team.
- Evaluate the structural integrity of the building and also demonstrate "imminent and impending peril" to public health and safety caused by the structure.
- Make arrangements to remove and transport all asbestos and lead-based paint materials to a permitted facility prior to building demolition.
- Obtain photographs of the property and verify the address.
- Provide additional photographs of the property taken immediately prior to and following demolition.

7.2 MOBILE HOME PARK PROCEDURES

7.2.1 Post-Disaster Requirements

Hurricanes and tornadoes can cause severe damage to mobile homes and create extensive amounts of mixed debris confined to relatively small areas. The following are examples that comprise mixed debris:

- Trees blown-down.
- Out buildings.
- Screened porches.
- Mobile home frames.
- Personal property, such as clothing, food and furniture.
- Appliances, such as stoves, refrigerators, washers and dryers. Household cleaners and paints.
- Propane and oxygen tanks.
- Gasoline, oil and lubricants.
- Automobiles, trucks and boats.
- Bicycles and lawn mowers.
- Utility hookups.

Local mobile home parks should be surveyed and arrangements should be made with park owners for local or State agencies or contractors to clear the parks of debris. The local designated debris manager and staff will need to closely coordinate the cleanup activities and enforce condemnation procedures. Legal, health, and safety concerns will have an important impact on the debris removal activities.

7.2.2 Planning Issues

Prior to a major natural disaster, local officials should do the following:

- Develop generic scopes of work for debris removal.
- Identify sites suitable for temporary storage of mobile home debris.
- Prioritize mobile home parks for debris removal.
- Develop a set of procedures to be followed that will combine debris removal activities and utility repair/replacement at mobile home parks into a single operation.

7.2.3 Documentation Checklist

Local officials should provide the following documentation:

- Copies of the local ordinance authorizing condemnation of mobile home parks. Condemnation for health issues is associated with prolonged exposure of trailer contents to the natural elements.

- A copy of the local government resolution with appropriate recitals required to support adoption or enactment of ordinances to condemn, demolish and remove mobile home park contents.
- Maps showing easements and ROW access to the property.
- Documentation signed by the mobile home park owner and mobile homeowner that hold the local, State or Federal government free from liability for damage caused by the requested work and indemnifies the local, State or Federal government against any claims arising from such work.
- Documents allowing ROE to the mobile home parks.
- Notice to individual mobile homeowners to remove items of personal property in accordance with local ordinances.
- Documentation providing the names of mobile home parks and of mobile home park owners, complete addresses and legal descriptions of the properties and limits, if any, of debris clearance to occur within the parks. Additional materials should include plats of the mobile home parks and any information about existing utilities.
- Standards for capping all utilities.
- All applicable permits necessary for any demolition work in the mobile home park.

7.2.4 Inspection Prior to Debris Removal

Local officials should perform the following actions:

- Ensure that the mobile home park will be vacated prior to the removal of any debris from the site.
- Describe clearly and completely the extent of debris removal required within the mobile home park. Specify any structures, other than mobile homes, that are to be removed.
- Locate and estimate amount of household hazardous waste within the park and ensure that appropriate procedures are established for separation and removal of such materials prior to debris removal. Household hazardous waste typically found on-site includes cleaning supplies, propane tanks, paint cans, paint thinners, pesticides, refrigerators, and freezers. A qualified environmental contractor should be hired to ensure proper removal and disposal of asbestos, lead-based paint and other commercial, agricultural or industrial hazardous waste.
- Conduct initial inspections of the mobile home park with representatives from the local government, public health office, building and zoning office, real estate office, and other State and Federal officials.
- Ensure that the contract scope of work reflects findings of the field inspection.
- Ensure that the mobile homes are unoccupied.
- Ensure that the property is posted in accordance with local regulations and that mobile home owners have removed their personal property.
- To avoid subsequent disputes, ensure that any agreement made with the mobile home park owner is in writing.

- Obtain photographic documentation of mobile home sites prior to commencement of work.
- Have organic and perishable materials removed from the site.

7.2.5 Mobile Home Park Utilities

Local officials should accomplish the following actions:

- Consider whether using heavy equipment will cause further damage to existing utilities.
- Be responsible for turning off utility services, such as water, telephone, electricity, natural gas and propane gas.
- Flag septic tank locations prior to debris removal. Special care must be given to protect septic tanks during debris removal operations.

7.2.6 Debris Removal Contracts

Contracts should include provisions for the following:

- Provide that all private automobiles are stored in a specific location within the park to be retrieved later by the owners.
- Provide salvage rights to the contractor for materials remaining on-site at the time of debris removal where beneficial to the government.
- Require flagging of existing utilities prior to debris removal.
- Use rubber tire vehicles and backhoe with grapple attachments to protect existing utilities.
- Require the contractor to phase debris removal operations to allow utility repair and or replacement to begin immediately after an area has been cleared.

7.3 NAVIGATION HAZARD REMOVAL PROCEDURES

Damage to publicly owned marinas caused by a major natural disaster can include abandoned sunken boats and other debris that may impede navigation. The designated debris manager and staff should coordinate with the U.S. Coast Guard, the Louisiana Department of Natural Resources (LDNR), local government agencies, legal counsel, and contractors specializing in marine salvage operations, commercial divers and certified surveyors to ensure that navigation hazards are removed safely and efficiently. Navigation hazard removal shall be performed in accordance with LDNR's Marine Debris Program.

The following checklist should be used to ensure that all aspects of removing navigation hazards are considered:

- Coordinate with U.S. Coast Guard, LDNR, local government agencies and legal counsel.

- Inspect marinas to locate debris:
  - Visually by helicopter or boat.
  - Via side-scan sonar.
  - Via diving.
- Use Global Positioning System survey methods or some type of flotation marker to pinpoint location of sunken debris.
- Keep a log that reflects an accurate count of debris items with corresponding locations.
- Record the vessel registration number and photograph the wreckage.
- Provide notification by certified letter to private owners of impending vessel removal. This should be performed in accordance with legal constraints.
- Provide the owner an opportunity to remove the vessel prior to local, State or
- Federal government initiation of debris removal.
- Provide public notice in local newspapers.
- Generate scopes of work based on items to be removed.
- Maintain flexibility to allow for problems caused by tidal conditions. Problems can also occur as a result of wreckage removal by others prior to issuance of contract notice to proceed. Flexibility in contract execution can be achieved by issuing an equipment rental type contract. Fixed price contracts with each piece of debris indicated as a line item are not recommended because of the possibility of change orders. Incorporate in the contract appropriate regulatory concerns and/or applicable State laws.
- Maintain continuous communication with local and State authorities.
- Continually verify the number and location of sunken vessels and ensure that accurate records are maintained.
- Require that a bill of sale or a vessel registration be presented to the local government representative on-site if an individual claims a vessel during removal operations.
- Ensure that contracts and the cleanup schedule incorporate tidal constraints. Debris located in shallow areas may be inaccessible to contractor equipment during low tide.

Section 8
Public Information Plan

8.1 PUBLIC INFORMATION OFFICER

The Public Information Officer and is charged with developing a proactive information management plan and will direct Public Information staff to implement the Public Information Plan. The Parish President assists by conducting interviews with local media outlets. Emphasis will be placed on actions that the public can perform to expedite the cleanup process.

St. Charles Parish's public information strategy involves the following tasks:

- Prepare information to be distributed
- Establish a process to distribute the information
- Establish a process to update, correct, revise, and redistribute information as operations progress
- Establish a debris information center (toll free hot line) or a venue to address all concerns, questions, and complaints

8.2 PRE-SCRIPTED INFORMATION

The debris mission information should include the parameters, rules, and guidelines of debris operations so residents can begin their personal recovery activities. The staff responsible for developing and writing the information will present the information in a clear, direct, and organized manner. The language used must be simple and easy for all residents to understand. Information may have to be distributed in more than one language for it to be understood by non-English-speaking populations and neighborhoods.

Historically, St. Charles Parish's primary means of disseminating information to the public is via the Parish's website: www.stcharlesparish-la.gov. Social media, flyers, newspapers, radio and TV public service announcements also may be used to obtain the public's cooperation by separating burnable and non-burnable debris, segregating household hazardous waste, placing disaster debris at the curbside, keeping debris piles away from fire hydrants and valves, reporting locations of illegal dump sites or incidents of illegal dumping and segregating recyclable materials.

8.3 DISTRIBUTION PLAN

The public information strategy is to disseminate the prepared information to the general public. This can be accomplished in a number of ways:

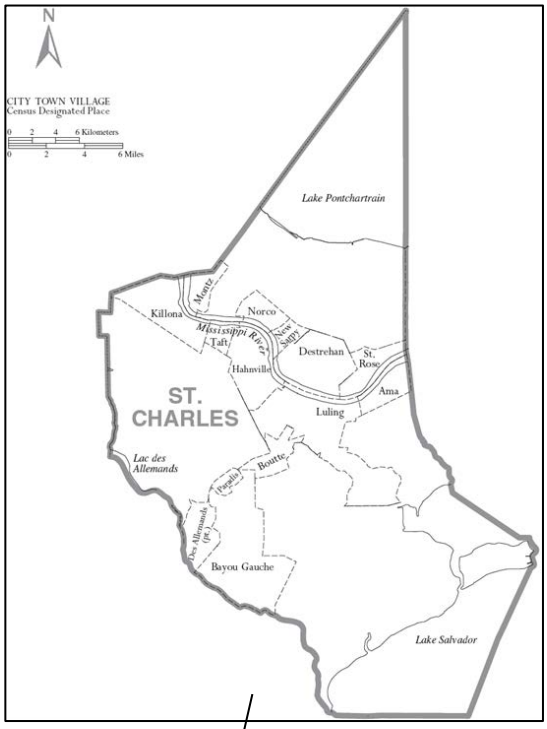
- Internet Site – Parish website containing debris information flyers for printing.
- Media – Local television, social media, radio, newspapers, or community newsletters.
- Public Forums – Interactive meetings at town hall or shopping mall kiosks.

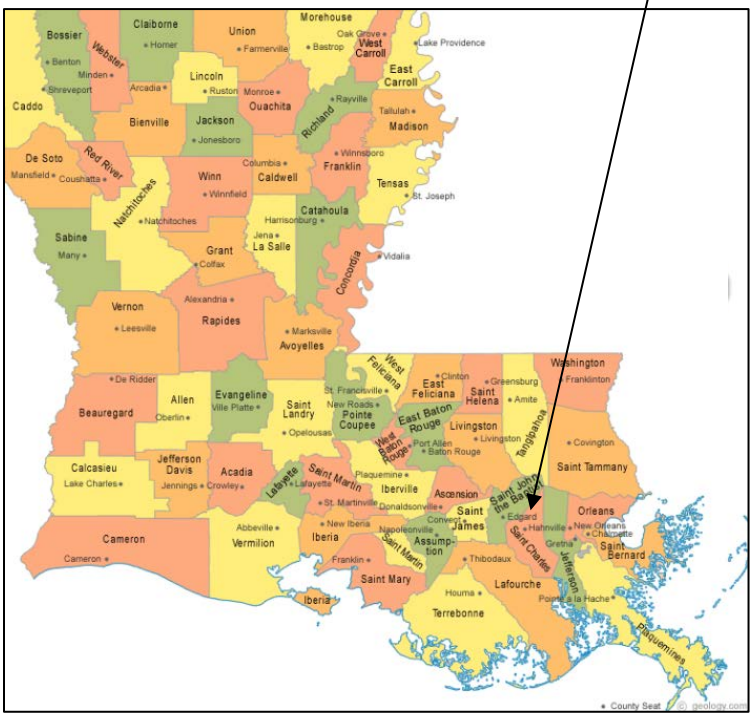
The Public Information staff will take advantage of every information vehicle available if power, utilities, and other infrastructure have been damaged. Many times the best carriers of information are the responders in the field. The general public recognizes their role and frequently asks questions regarding the operations.

Appendix A

St. Charles Parish Jurisdictional Map

ST. CHARLES PARISH JURISDICTIONAL MAP





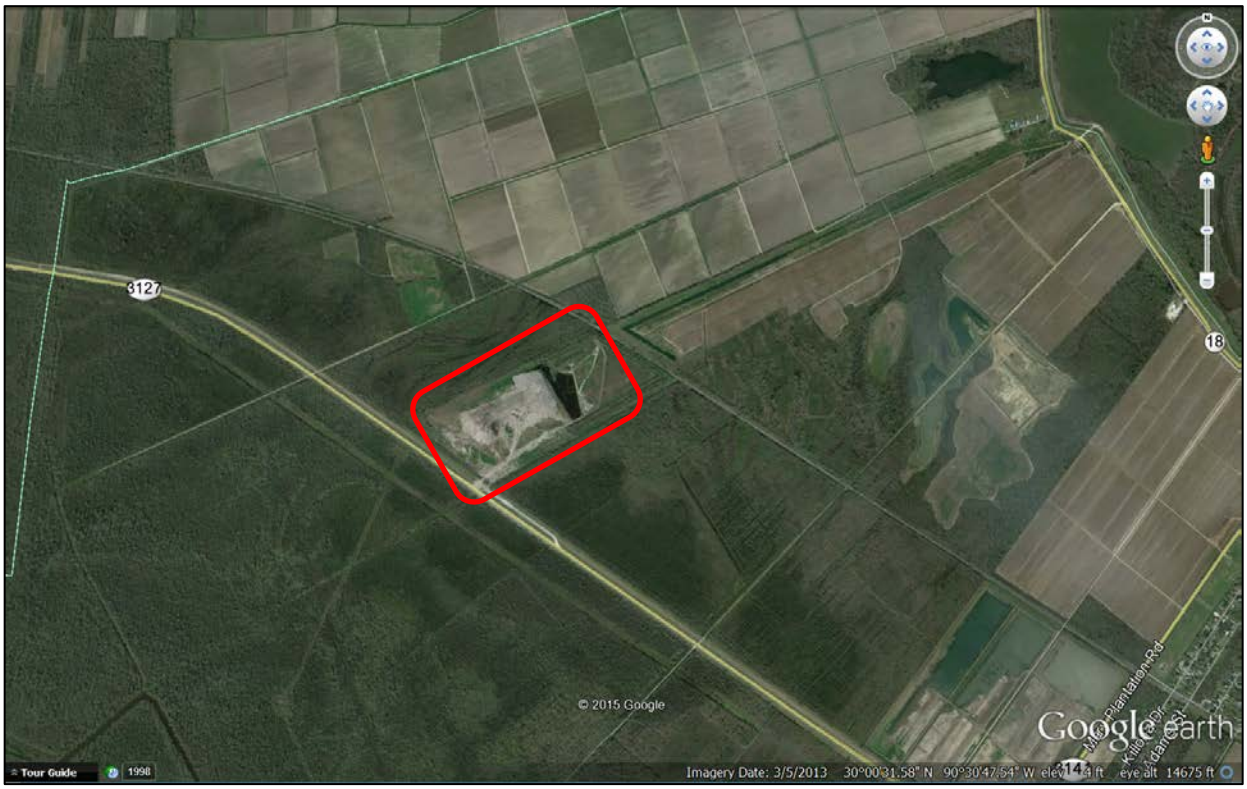
Appendix B

Debris Management and TDSR Sites

DEBRIS MANAGEMENT SITE

K.V. Enterprises, LLC (Landfill)
5900 Highway 3127
Killona, LA 70057

Coordinates: Latitude 30.005586 Longitude -90.519122



TEMPORARY DEBRIS STAGING & REDUCTION SITE

Montz Park
17196 LA Hwy 628
Montz, LA 70068

Coordinates: Latitude 30.001858 Longitude -90.456297

Note: This site is used for temporary staging and/or stockpiling of debris only.

TEMPORARY DEBRIS STAGING & REDUCTION SITE

Davis Pond Freshwater Diversion Canal Pump Station Access Rd.
Willowdale Blvd.
Luling, LA 70070

Coordinates: Latitude 29.910533 Longitude -90.335303

Note: This site is used for temporary staging and/or stockpiling of debris only.

Appendix C

Load Ticket, Debris Monitor Inspection Report, and Truck Certification Form

Figure C-1 - Load Ticket

Load Ticket	**Ticket No. 0012345**
Municipality (Applicant)	Prime Contractor
	Sub-Contractor

Truck Information

Truck No	Capacity
Truck Driver (print legibly)	

Loading Information

	Time	Date	Inspector/Monitor
Loading			

Location (Address or Cross Streets)

When Using GPS Coordinates use Decimal Degrees (N xx.xxxxx)

N IW

Debris Classification	Estimated o/o, CYs, or Actual Weight
D Vegetation D C&D D White Goods D HHW D Other* See Below	

	Time	Date	Inspector/Monitor
Unloading			

OMS Name and Location

•other Debris Explanation	Original: Applicant Copy 1 Copy2 Copy3

Figure C-2 - Debris Monitor Reports

MONITOR DAILY ACTIVITY REPORT

Name:_____

Activity _____ Date_____

FEMA - 0000 - DR - 00

Location Covered by this report _____

Weather Conditions _____

Summary of Daily Activities

Safety Comments:

Figure C-3 - Truck Certification List

TRUCK CERTIFICATION FORM

DUiMP TRUCK

ff measurements

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

Hoist Measurement — length₁ (L_1) ft = ______ length₂ (L_2) ft = ______ WidthH (WH) ft = ______ Height,. (HH) ft = ______

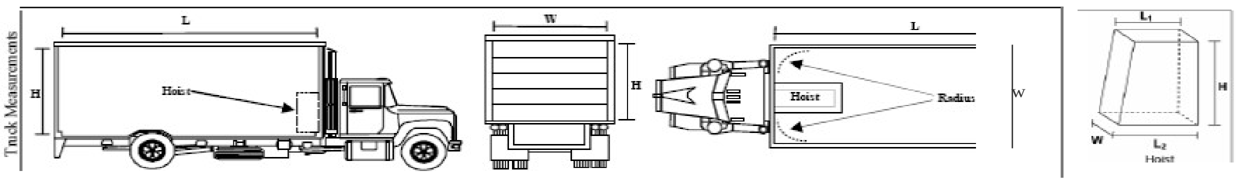
Radius — Raditts ft = ______ Height (H) = ______

Calculations

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

Total = ______ cyd

Cubic Yards



EXTRA TRAILER

feasurements

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

Hoist Measurement — length₁ (L_1) ft = ______ length₂ (L_2) ft = ______ WidthH (WH) ft = ______ Height,. (HH) ft = ______

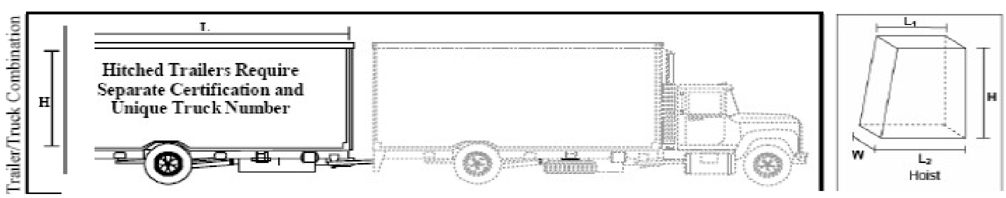
Radius — Raditts ft = ______ Height (H) = ______

Calculations

Bed Volume (Basic)	(lxWxH)/27 =		cyd
Hoist Volume	$((L_1+L_2/2) \times W \times HH)$ =	-	cyd
Raditts Volume	$(3.14xR^2 xH)/27$ =	-	cyd

Total = ______ cyd

Cubic Yards



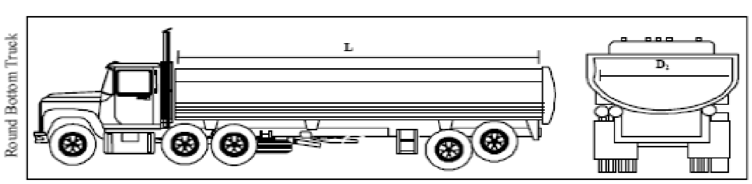
ROUJ'..'D BOTTOM TRUCK

feasurements

Truck Measurements — len:cth (1) ft = ______ Diameter (D) ft = ______

Calculations

Approx. Volume $(3.14 \times (D/2)^2 \times 1)/27$ = ______ cyd (ronndboHompcrtlon o:lly)



Cubic Yards

Appendix D

Pre-qualified Debris Management Contractors

Pre-qualified Debris Management Contractors

The following debris management contracts are currently in effect and were procured by competitive proposals according to Federal, State, and local regulations:

Debris Removal

Ceres Environmental Services, Inc.
9945 Windfern Road
Houston, TX 77064

Contract Term: January 1, 2013 – December 31, 2016

Debris Monitoring

Tetra Tech, Inc.
2301 Lucien Way, Suite 120
Maitland, FL 32751

Contract Term: May 23, 2013 – December 31, 2016

Debris Disposal

K.V. Enterprises, LLC
5900 Highway 3127
Killona, LA 70057

Contract Term: June 25, 2013 – December 31, 2016

Note: Services covered by the above listed debris management contracts may not commence prior to issuance of Notices to Proceed to the respective contractors by St. Charles Parish.