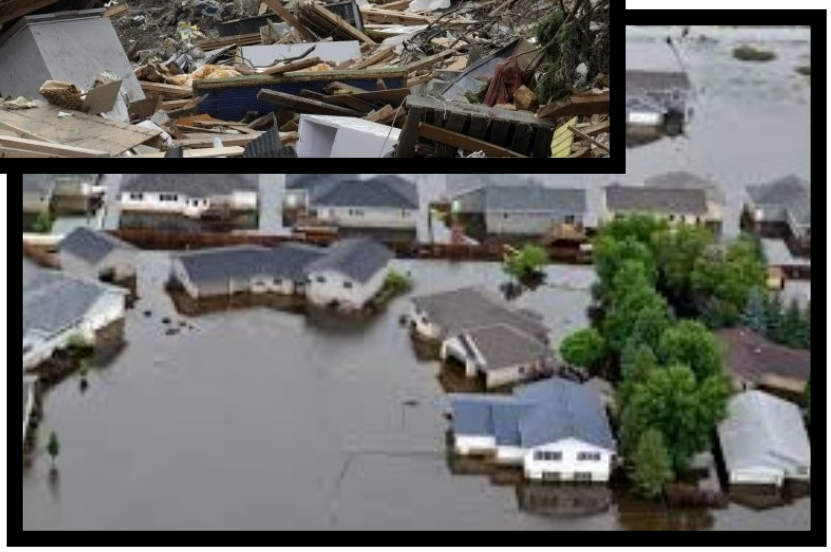
WILL COUNTY
DEBRIS MANAGEMENT PLAN
2016



PRIMARY AGENCY

Will County Land Use

SUPPORT AGENCIES

Will County Emergency Management
Will County Division of Transportation
Will County Health Department

INTRODUCTION

This plan is designed to implement the timely and thorough removal of debris from the County in a systematic way that ensures the return of critical services and promotes public safety.

Natural disasters such as tornadoes and flooding precipitate a variety of debris that includes, but is not limited to, trees, and other vegetative organic matter, constructive materials, appliances, personal property, mud, and sediment. Man-made disasters such as terrorist attacks may result in a large number of casualties and heavy damage to buildings and basic infrastructure. Crime scene constraints may hinder normal debris operations, and contaminated debris may require special handling. These factors will necessitate close coordination with local, State and Federal law enforcement, health, and environmental officials.

This plan takes an all-hazards approach to identifying and responding to the following hazards that may pose a threat to Will County:

> *Natural Hazards* – severe weather, ice and wind storms, tornadoes, flooding, or hail.
>
> *Human-Caused Events and Hazards* – urban fires, special events, civil disorder, or transportation accidents; and
>
> *Terrorist Incidents* – bomb threats or attacks, sabotage, hijacking, armed insurrection, or Weapons of Mass Destruction (WMD) incidents.

This is a support plan to the Will County Emergency Operations Plan, which was revised in January of 2015 as well as the Will County Hazard Mitigation Plan. This plan has been developed in conjunction with all primary and support agencies having responsibility for debris management. This plan has officially been adopted by the County of Will as of March 2016.

PURPOSE

This plan has been developed to provide the framework for County government and other entities to clear and remove debris generated during a public emergency within the limits of Will County. This plan unifies the efforts of public and private organizations for a comprehensive and effective approach to:

- Provide organizational structure, guidance, and standardized guidelines for the clearance, removal, and disposal or debris caused by a major debris-generating event.

- Establish the most efficient and cost effective methods to resolve disaster removal and disposal issues.
- Implement and coordinate private sector debris removal and disposal contracts to maximize cleanup efficiencies.
- Expedite debris removal and disposal efforts that provide visible signs of recovery designated to mitigate the threat to the health, safety, and welfare of residents.
- Coordinate partnering relationships through communication and pre-planning with local, State, and Federal agencies that have debris management responsibilities.

This plan will serve as the master plan for the County and contains guidance regarding organization, responsibilities, documentation, contracting, activation of the county plan, temporary debris storage sites, informational fact sheets, and samples of agreements and contracts.

SITUATION

Will County is vulnerable to numerous natural and technological hazards, including sever weather and hazardous materials spills. Critical government and private facilities are potential targets for terrorist attacks. The County can manage disaster situations with internal resources. However, there are potential debris-generating events that may overwhelm the County's assets and capabilities.

Natural and manmade disasters precipitate a variety of debris that includes, but is not limited to trees, sand, gravel, building/construction materials, vehicles, personal property, hazardous materials, 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.

Some or all jurisdictions within Will County may experience events which result in large amounts of debris that may adversely affect public safety.

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 collected and disposal methods used to address the debris problem, associated costs incurred, and the speed with which the problem can be addressed.

Communities have varying and unique circumstances that could impact the types and amounts of debris and the response to debris cleanup. These may include types of local businesses/industry, land use, size of the community, topography, and economics. Individuals and businesses will be responsible for the removal and disposal of debris on private property.

Jurisdictions must be prepared to conduct emergency debris removal on their own during the initial phases of an emergency or disaster and must consider public safety as their first and top priority.

During disaster situations, Will County will have difficulty locating staff, equipment, and funds to devote to debris removal, in the short as well as long term.

Land Use Patterns

Will County has a mixture of land uses that range from urban to rural areas. Will County is the second fastest growing county in Illinois. Due to this rapid growth, many changes are occurring within the County. Some of these changes are seen as progress, others are seen as infringements on the quality of life residents have experienced for many years. Over the years, changes in lane use have been decided

by the more than thirty different authorities in change of planning and land use regulation. On April 18, 2002, the County Board approved a new *Land Resource Management Plan* (LRMP).

With experts anticipating the population to increase by 60% by 2020 and the possibility of a new airport being built in the southern portion of the County, community members have come to realize the importance of the development of a regional plan that coordinates the management of land use within the County.

Currently, there are over 500,000 acres of land in Will County. Approximately 100,000 acres are developed for non-agricultural use. Almost 300,000 acres are used for agricultural purposes with the remaining 100,000 acres vacant. Urban areas are presently found in the northern half of the county. Joliet, the county seat, is the largest city in Will County. Other urban centers locations in the northern townships are Plainfield, Lockport, New Lenox, Mokena, and Frankfort along with Monee and Crete found in the most eastern townships. The City of Naperville and the Village of Bolingbrook are urban centers; however, their boundaries span both Will County and DuPage County.

Hazard Loss Modeling

To supplement the impact analysis and risk determination, a hazard loss model and analysis was performed for select scenarios for natural, technological, and societal hazards. The scenarios selected were based on historical occurrences of disasters, availability of data, and the severity of the hazard risk. The hazard loss analysis process utilized Hazards U.S. – Multi-hazard (HAZUS-MH) modeling, GIS analysis, and available historical disaster data and information to conduct quantitative analysis to estimate the loss due to the selected natural, technological and societal hazard events. HAZUS-MH is a powerful risk assessment software program for analyzing potential losses from floods, hurricane winds and earthquakes. In HAZUS-MH, current scientific and engineering knowledge is coupled with the latest Geographic Information Systems (GIS) technology to produce estimates of hazard related damage before, or after, a disaster occurs.

The analysis reports obtained from the HAZUS-MH model includes the following:

- Estimation of the losses to structures and contents
- Estimation of the losses to structure use and function
- Projection of human losses
- Estimation of the primary direct and indirect loss

The HAZUS-MH and GIS analyses were used to determine which individual assets were vulnerable to the largest potential losses; by adding the structure loss, content loss, and function loss for each asset to determine the total loss. This process produced the following:

- Calculation of the losses to each asset
- Calculation of the estimated damages for each hazard event
- Creation of a map that shows a composite of the areas of highest loss

Many of the human-induced hazards provide some unique implications for loss estimation because these events can take place with different magnitudes, in any location, at any time, and under various circumstances. Because the characteristics of many of the human-induced events are not definitive, a generalized loss analysis was conducted. The following scenarios were assessed and analyzed utilizing GIS data and HAZUS-MH modeling.

Overbank Flooding Event of Will County Stream and River Reaches.

- A F4 Plainfield Tornado.
- A 5.3 magnitude earthquake in DuPage County. This was the largest historical earthquake in the Chicago area.
- A hazardous materials release from a large industrial facility.
- A hazardous materials release from a transportation incident.
- A terrorist bombing with a similar magnitude of that of the 1995 Oklahoma City bombing.

The Hazard Loss Modeling findings and reports are provided in Appendix 26 (Will County Hazard Mitigation Plan- Appendix B).

Scenario Summaries

Overbank Flooding Event of Will County Stream and River Reaches

The FEMA Flood Insurance Rate Maps (FIRM) indicate that a large area of Will County's built environment is within the Base Flood Elevation. The Base Flood Elevation (BFE) is defined as the area that has a 1% chance of flooding in any given year. HAZUS-MH Flood Risk Module would be utilized for modeling riverine flooding of Will County's stream and river network.

F4 Plainfield Tornado

GIS Analysis was utilized to determine the impacts of the 1990 Plainfield Illinois F4 tornado that skipped through Will County during midafternoon. Although the track of this tornado was identified, detailed information on the area damaged could not be determined. Will County GIS data was utilized to determine structures identified within the damage areas. The potential loss of a F4 tornado traveling a similar path as the 1990 F4 tornado was projected based on today's built environment and in today's economy.

5.1 Magnitude Earthquake in DuPage County, Illinois

This was the largest historical earthquake in the Chicago area. HAZUS-MH Earthquake Risk Module provides estimates of damage and loss to buildings, essential facilities, transportation and utility lifelines, and population based on scenario or probabilistic earthquakes. In addition, the Earthquake Risk Module estimates the debris generated, fire, casualties, and shelter requirements following the disaster. Based on consultation with the Illinois State Geologic Survey, the May 26, 1909 earthquake that occurred near Aurora, Illinois is the best scenario to model with the limitations on available data. Although this earthquake was a 5.1-magnitude, limitations of the HAZUS-MH model does not provide accurate information for those earthquakes less than a magnitude 5.5. Therefore, this earthquake analysis assumes that this historical earthquake had a magnitude of 5.5. Due to information constraints on soil types, the analysis of a larger earthquake generated from the New Madrid Fault could not be conducted.

Hazardous Materials Release: Fixed Facility

The U.S. EPA's ALOHA (Areal Locations of Hazardous Atmospheres) model was utilized to assess the area of impact for a chlorine release at a large industrial facility located southwest of Joliet near Arsenal Road and Interstate 55. Chlorine is a common chemical that is used in industrial operations and can be found in either liquid or gas form. For this scenario, moderate atmospheric and climatic conditions with a slight breeze from the west were assumed. The target area of Arsenal Road and I-55, "Joliet Arsenal

Hub", was chosen due to its large industrial facilities, rail and truck hubs, and the presence of a large number of large quantity hazardous material generators.

Hazardous Materials Release: Transportation Incident
The U.S. EPA's ALOHA (Areal Locations of Hazardous Atmospheres) model was utilized to assess a chlorine release from a barge at a large transportation hub southwest of Joliet at US Route 6, Interstate 55, and the Des Plaines River. Rail, truck tankers, and barges commonly haul chlorine, as well as other hazardous materials, to and from facilities. For this scenario, moderate atmospheric and climatic conditions with a slight breeze from the west were assumed. The target area of the US Route 6, I-55, and Des Plaines River was chosen due to its heavy barge traffic, large rail and truck hubs, as well as the presence of a large number of large quantity hazardous material generators.

Terrorist Bombing
GIS Analysis was utilized to determine the impacts of a bombing near a critical infrastructure of Will County with a similar magnitude of the April 19, 1995 Oklahoma City Bombing. In the Oklahoma City Bombing, a Ryder rental truck was loaded with approximately 5,000 pounds of ammonium nitrate fertilizer and detonated outside of the Murrah Federal Building. The explosion generated a pressure blast of 500,000 psi, destroyed one-third of the Murrah Federal Building, and created a crater thirty feet wide and eight feet deep. The Will County target analyzed in this hazard modeling is the Will County Court House.

Limitations
The analysis of hazards is complicated by a number of factors including laws, customs, ethics, values, attitudes, political preferences, and complex infrastructures and built environment. A hazard analysis provides a wealth of valuable information that is essential for identifying goals, prioritizing actions, planning and preparedness, and recovering and mitigating future hazards.

The assessment of data and identifying the risk to a community is not a hard science. It is difficult to predict hazard impacts, and conclusions are not absolute. The perception of what constitutes a risk and a judgment of its impact can differ from individual to individual. The changing natural, built, or societal environments can have a significant effect on each hazard assessment. A hazard risk assessment does provide a guide to evaluate Will County's risks and guides the Will County EMA to perform their mission of protecting the County. For this reason, it is important to periodically update and improve the County's Risk Assessment with best available data.

ASSUMPTIONS
1. A disaster that requires the removal of debris from public or private lands and waters could occur at any time.
2. Extraordinary demands will be placed on the public and private resources for debris management following a disaster event.
3. The amount of debris resulting from an event or disaster could exceed the local government's ability to dispose of it.
4. A coordinated community effort will be required to effectively collect, remove, and dispose of debris following a disaster.
5. In order to combine local resources (personnel, equipment, supplies) various jurisdictions may join together to establish a local area of operations for collecting and handling debris.

6. Mutual aid from adjacent jurisdictions will be coordinated with pre-disaster planning.
7. Temporary debris storage and reduction sites will be located in each of the local jurisdictions area of operations in order to provide a site near by thus reducing transportation time and cost.
8. Pre-disaster planning will provide the jurisdiction knowledge of debris management and how to organize locally to conduct debris removal operations this ensuring that cost effective and environmentally sound practices will be used.
9. If the natural disaster requires, 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.
10. Private contractors will play a significant role in the debris removal, collection, reduction and disposal process.
11. The debris management program implemented by Will County Emergency Management Agency will be based on the waste management approach of reduction, reuse, and reclamation. Resources recovery, incineration, and land filling, respectively.

FORECASTED HAZARDS

Will County is susceptible to a variety of natural or human-caused incidents that may create disaster debris. A listing of potential debris causing incidents and the types of most common debris are listed in the following table.

Characteristics of Disaster Events in Will County

Incident	Debris Characteristics	Probability	Debris Impact
Animal Disease Outbreak	Variable amounts of putrescible waste that might require special handling as problem waste with specific disposal instructions.	Low	Moderate
Flood	Construction/demolition waste, municipal solid waste, and problem waste, including sediment, vegetative waste, animal carcasses, and hazardous materials deposited on public and private property. Much of the debris from flooding events may be considered problem waste because of contamination from wastewater, petroleum, or other substances.	High	High
Severe Thunderstorm	Construction/demolition waste, municipal solid waste, and problem waste, including sediment, vegetative waste, animal carcasses, and hazardous materials deposited on public and private property.	High	Moderate
Severe Winter Weather	Primarily vegetative waste from broken tree limbs and branches. May also include construction/demolition waste and putrescible waste from extended power outages.	High	Moderate
Tornado	Primarily vegetative waste; may also include construction/demolition materials from damaged or destroyed structures, some municipal solid waste from damaged structures. Extended power outages may result in large amounts of putrescible waste from private homes and grocery stores.	High	High
Wildfire	Burned vegetation waste, burned construction/	Low	Low

	demolition.		
Windstorm	Primarily vegetative waste; may also include construction/demolition materials from damaged or destroyed structures, some municipal solid waste from damaged structures. Extended power outages may result in large amounts of putrescible waste from private homes and grocery stores.	High	Moderate

Although disasters have occurred in the County, Will County and its jurisdictions have not experienced a catastrophic natural event, a terrorist attack or an incident of national significance. Despite this, emergency management agencies throughout the County recognize that a disaster could occur in the future with little or no warning. The development of open space and farmland, increasing dependency on technology, and new developing threats greatly enhance the possibility and impact of a disaster.

WILL COUNTY FEDERAL DISASTER DECLARATION HISTORY		
Date	**Declaration #**	**Incident Type**
05/27/1961	115	Flood & Tornadoes
04/25/1965	194	Tornadoes, Severe Storms & Flooding
04/25/1967	DR-227	Tornado
06/10/1974	DR-438	Tornado & Flooding
01/16/1979	DR-3068	Snow
06/30/1981	DR-643	Flood
02/23/1985	DR-735	Severe Storm, Flooding & Ice Jams
08/29/1990	DR-878	Tornado
07/18/1996	DR-1129	Flood
01/01/1999	EM-3134	Snow
12/11/2000	EM-3161	Severe Winter Storm
09/11/2001		Simultaneous Terrorist Attacks
04/20/2004	DR-1513	Tornadoes
08/29/2005	EM-3230	Hurricane Katrina Evacuation
08/23/2007	DR-1729	Severe Storms & Flooding
09/13/2008	DR-1800	Severe Storms & Flooding
02/02/2011	DR-1960	Snow Storm
04/18/2013	DR-4116	Flood
11/17/2013	DR-4157	Tornado

FORECASTED DEBRIS TYPES

Natural disasters such as straight line winds, downbursts, derecho, tornadoes and floods are expected to generate a variety of debris including but not limited to: vegetative material, building materials, vehicles, personal property, soil, and hazardous substances. For most natural disasters, vegetative debris is expected to be produced in greater volumes than all other categories combined. Forecasting will be in accordance with the formulas listed in Appendix 1.

FORECASTED DEBRIS QUANTITY

Quantity of debris generated from any event is unknown. However, based on the HAZUS software modeling tool results (Appendix 26 – Will County Hazard Mitigation Plan's Hazard Modeling), we can determine that;

Flooding *– the majority of flooding will occur in the western half of Will County in the urban area of Joliet. The 9 census blocks affected primarily had an estimated total loss exceeding $6 million each.*

Tornado *– at 0.3 miles wide an estimated 2,412 buildings would be damaged by an F4 tornado, totaling almost $574 million, of the buildings damaged, 2,368 are residential structures, totaling almost $486 million. There would be approximately 9,000 people affected by this scenario.*

At 0.9 miles wide, there are an estimated 6,718 buildings damaged, totaling almost $1.6 billion. Of those buildings damaged, 6,590 are residential structures, totaling $1.3 billion. There would be over 23,000 people affected by this scenario.

Based on the estimating Debris Quantity equation: Q=H(C)(V)(B)(S)

We know:

H = 6,590

C = 50

We can assume:

V = (1.1)

B = 1.0

S = 1.0

So Q=6,590(50)(1.1)(1.0)(1.0) therefore the estimated amount of cubic yards of debris generated is 362,450cy. This model can only predict Tornado and Hurricane debris. (See Appendix 1 for debris forecasting equations).

Earthquake *– 5.3 magnitude earthquake with the epicenter in Aurora, Illinois; an estimated 12,369 buildings will be at least moderately damaged and 405 buildings damaged beyond repair. Total building related losses were 1,137.82 (millions of dollars).*

Hazardous Materials Release *– 1,783 buildings would be exposed, this is relatively 5,427 people affected totaling approximately $329,586 dollars.*

Hazardous Materials Release (Barge) *– 8,205 buildings would be exposed impacting approximately 27,722 people with an estimated cost of $2,081,929.*

Bombing *– a bombing near a critical piece of county government; in this scenario the Will County Court House was the point-of-origin, this would impact 19 buildings with a replacement cost of $53,590,000.*

CONCEPT OF OPERATIONS

In the event of debris generating incident, the Will County EMA Director would normally activate the County Emergency Operations Center (EOC) and various members of the Debris Management Team may be requested to assist the EOC staff in the management of the debris situation.

Local jurisdictions will evaluate the amount of damage and debris within their jurisdiction and provide the County EMA information on amount of damage and debris removal actions planned. Requests for disaster assistance will be in accordance with the Will County Emergency Operations Plan.

Each jurisdiction must execute an emergency declaration for their jurisdiction. A copy of the declaration will be sent to Will County EMA.

The following items would need to be considered during the response and recovery phase of debris management.

NOTE: *It is important to note that some activities may or may not qualify for reimbursement under a state or federal declaration; however, they may be critical to preventing the spread of disease in the communities.*

EVALUATION OF NEED

When a debris generating event occurs, the EMA Director, or designee, will brief the Team regarding the extent of the damage produced by the event and of actions planned or underway. Team members will provide any assistant or response necessary at the time.

An assessment of the debris situation county-wide will be made, to include estimates of damages by jurisdiction or joint jurisdiction and the County EOC, which will provide assistance and coordination for the jurisdiction as necessary.

Debris cleanup activities will be prioritized based on the four phases of debris activities.

Mutual aid assistance from unaffected jurisdictions and from other counties will be requested whenever necessary. Assistance may be available from surrounding county health departments or solid waste districts. Written agreements should be signed to clarify the terms of assistance.

DETERMINATION OF APPROPRIATE STRATEGY

Debris types may include:

- Woody and tree material
- Household goods, including furniture, personal belongings, and appliances
- Food waste
- Utility poles and wires
- Hazardous materials and infectious waste
- Vehicles and tires
- Building material
- Animal carcasses
- Silt and mud

Means of collection may include:

- Use of authorized waste transfer or disposal facilities
- Establishment of alternate or Temporary Debris Storage and Reduction (TDSR) sites
- Direct pickup
- Placement of dumpsters

MEANS OF REDUCTION:

Incineration: Incineration reduces the volume by approximately 95 percent, leaving only ash residue for disposal. Incineration of vegetative matter will be conducted in accordance with state and

local regulations. Air quality criteria shall be monitored throughout the incineration process. If air quality standards are not being met, the incineration operations shall be adjusted or terminated, until air quality are achieved. The site manager shall be responsible to insure that only properly trained personnel are allowed to operate the incineration equipment. Limited firefighting apparatus shall be available and maintained onsite. Disposal of ash from the incineration operation will be conducted in accordance with regulatory requirements and may include: agricultural land application, landfill cover application, and burying onsite, as allowed. Responsible environmental recycling will be encouraged.

Grinding and chipping: Grinding and chipping reduces the volume of material by 75 percent; since 25 percent of the volume remains, the benefits of this reduction method can be increased by identifying alternative uses of the residual material. The ability to use recycled wood chips as mulch for agricultural purposes, fuel for industrial heating, or in a cogeneration plant helps to offset the cost of the chipping and grinding operation.

Grinding and chipping operations of vegetative matter shall be monitored at all times for possible safety hazards. The site manager shall be responsible to insure that only properly trained personnel are allowed to operate grinding and shipping equipment.

Final disposal of the ground and chipped vegetative debris shall be done in accordance with applicable regulatory guidelines and may include: disposal in methane generating landfill, landfill cover, landscape mulch, conversion fuel pellets, erosion control, surface land applications or be stored at an appropriate location to biodegrade into soil.

Recycling: Reducing and/or recycling disaster-related debris has financial an environmental advantages. These operations can decrease the overall cost of a debris removal operation by reducing the amount of material that is taken to a landfill. This diminished the cost of final disposition in the form of tipping fees. In the case of recycling, potential end-use products for specific markets may offset the cost of operations even more. In many communities, recycling operations are an important component of the community public policy and are a priority.

Common Recyclable Materials

Metals: straight line winds, downbursts, derecho, and tornadoes can cause extensive damage to mobile homes, sun porches, and green houses. Most of the nonferrous metal debris is suitable for recycling. Metal maulers and shredders can be used to shred trailer frames, trailer parts, appliances, and other metal items. Ferrous and nonferrous metals are separated using an electromagnetic and then sold to metal recycling firms.

Soil: Debris removal operations may include transporting large amounts of soil to the TDSR. At the TDSR, it may be combined with other organic materials that will decompose over time. This procedure can produce significant amounts of soil that can be sold, recycled back into the agricultural community, or stored onsite to be used as cover.

Concrete, Asphalts, and Masonry Debris: Concrete, asphalt, and masonry products can be crushed and used as a base material for certain road construction products or as a trench backfill. Debris targeted for base materials needs to meet certain size specifications as determined by the end user.

MEANS OF DISPOSAL

- Landfill disposal
- Incineration
- Sale or donation of reduced material
- Decontamination and reuse

Demolition

Demolition of a structure may be the only option in certain instances when severe damage has occurred. This will only be recommended after all other options have been explored:

a. Local building and zoning officers are required to inspect any buildings sustaining major damage.
b. The Will County Health Department may also conduct inspections in certain cases and has the authority to condemn buildings.
c. Permits for demolition are issued by the Will County Land Use Department.
d. Responsibility for all costs and removal of debris from demolition is the responsibility of the property owner.
e. When demolition is recommended, contracts and legal guidance will be necessary.

DEBRIS REMOVAL OPERATIONS

Debris removal operations will be divided by public and private property.

Public Property/Right-of-Way Debris Removal: Debris deposited on public lands including the right-of-way will be the responsibility of the local government.

In some cases, where a health and/or safety threat exists, private property owners may move event-related debris to the public right-of-way for removal by government forces.

Government forces or volunteers may assist private property owners if necessary to remove event-related debris that pose a health and/or safety threat.

Private Property Debris Removal: Debris deposited on private property is the responsibility of the property owner.

If private property debris removal is authorized a right-of-entry signed by the property owner should include a hold harmless agreement and indemnification applicable to the project's scope-of-work.

In some cases, where a health and/or safety threat exists, private property owners may move event-related debris to the public right-of-way for removal by government forces.

> Debris removal schedules will be published through local media outlets and provided to officials in affected jurisdictions for release to private individuals.
>
> Instructions for separation of debris and steps to follow if assistance is required in getting debris to curbside will be published with the removal schedule.

Volunteers or voluntary groups may assist property owners.

COLLECTION OF HAZARDOUS WASTE AND WHITE GOODS

The two most common types of debris that till need special handling are hazardous waste and white goods. Regardless of which collection method is used, the planning staff needs to understand the effects of this collection can have on the overall debris clearance, removal, and disposal mission.

Household Hazardous Waste (HHW)

HHW mixed with other debris types will contaminate the entire load, which necessitated special disposal methods such as storage in a particular part of a landfill. Typically, the landfill requires special liners and a more intense permit standard due to the hazardous waste. The disposal cost of HHW is generally higher than the disposal of other waste; therefore, the overall cost of debris disposal can escalate quickly if the HHW collection and disposal is not planned and executed with care.

White Goods

White goods are defined as discarded household appliances such as refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, televisions and water heaters. Many white goods contain ozone-depleting refrigerants, mercury, or compressor oils. The Clean Air Act prohibits the release of refrigerants into the atmosphere, and requires that certified technicians extract refrigerants from white goods before they are disposed of or recycled.

GUIDANCE FOR DEBRIS REMOVAL AND HOMEOWNER'S INSURANCE COVERAGE CONSIDERATIONS

In accordance with Section 312 of the Stafford Act, no applicant will receive assistance for any loss for which financial assistance has been received under any other program or from insurance or from any other source. Therefore, the use of Federal or State funds, insurance settlements, and other grants or cash donations granted for the same purpose constitutes a duplication of benefits.

Appendix 5 contains valuable information regarding the removal of eligible debris from private property; eligibility of curbside pick-up; and homeowner's insurance coverage for debris removal.

Debris Managers, other officials and operators should be familiar with the information provided in this appendix.

TEMPORARY DEBRIS STORAGE AND REDUCTION SITES (TDSRS)

Temporary debris storage and reduction sites may be on public or private land. Sites selected should be located as close as possible to the geographical areas affected.

The County and local Debris Managers will work together to coordinate the size and locations of the various sites, to develop appropriate site layout diagrams, determine site ingress/egress, determine site use and limitations, and other issues as required.

State and Federal guidelines for debris sites will be followed. IEPA representatives will be requested to review the sites and usage plans and provide comments as needed.

All sites will be entered into the County GIS mapping system and information on all sites within the county will be provided to all jurisdictions and concerned agencies and organizations.

Will County owns and operates a landfill, Prairie View Landfill; which would be used as the primary TDSRS for Will County. All municipalities currently maintain contracts with third party refuse haulers who would have the primary responsibility to remove appropriate refuse from a property and dispose of it properly. Additionally, vegetation would be the responsibility of the local government's public work's department and/or township road district.

Debris Site Security

Debris site security is required to ensure the site is not used for illegal dumping.

Security of the active temporary debris sites within the county and local jurisdictions will be coordinated by the County Sheriff's Office and with local law enforcement departments.

Debris Site Managers will be responsible for overseeing the security of jurisdictions site(s). All problems will be brought to the attention of the County EOC.

PUBLIC NOTIFICATION AND INFORMATION

It is extremely important for the public to be notified of the procedures to be followed in handling the debris on their property and businesses as soon as the information is available. This information should include:

- Notice of how removal of debris from private property will be conducted and what type of debris is eligible to be picked up.
- Dates, time and location schedules for debris pickup within the jurisdiction.
- Informational bulletins regarding the individual owner's responsibilities, insurance coverage considerations, volunteers, etc.

Public information will be in accordance with the Will County Emergency Operations Plan's Public Information and Warning Annex. Multiple methods of dissemination will occur during this time. Examples include: door-to-door pamphlets, social media, local radio stations, local news media as well as dissemination across the Joint Information System. Information may also be posted at critical points in an affected area. These critical points may be power charging stations, port-o-potties, supply stations, etc... Information will be updated on an as needed basis, as information changes so will the color or paper that notices are printed on as well as the date to ensure residents are receiving the most accurate information. Hotlines can also be established for residents to call in and obtain up-to-date information from a call center. Residence will be encouraged to separate debris into multiple categories to ensure proper disposal of items; these items must be located in the right-of-way. These categories will be:

- Electronics: televisions, computers, stereo, phones, DVD and Blu Ray Players, etc...
- Large Appliances: refrigerator, washer/dryer, air conditioner, stove, water heater, dishwasher, etc...
- Hazardous Waste: oil, batteries, pesticides, paints, cleaning supplies, and compresses gas.
- Vegetative debris: tree branches, leaves, logs, plants.
- Construction debris: building material, drywall, lumber, carpet, furniture, and plumbing.
- Household garbage: bagged garbage, discarded food, paper, and packaging.

USE OF FORCE ACCOUNT LABOR

Use of Force Account Labor is not permitted under the Will County Purchasing Ordinance (Appendix 25). All contracts for Will County will follow the Purchasing Ordinance and be subject to the bid

process as all services are. Due to the nature of this event, this process may be expedited to ensure timely restoration of services to residence.

CONTRACT MONITORING

In the event that contracts are used for debris removal, monitoring of contractors is a very important issue. The team will designate a person or person for contact monitoring. All contracts will be compliant with the Will County Purchasing Agreement (Appendix 26), failure to meet the needs of the Purchasing Agreement will terminate services. Will County Land Use Department currently maintains a list of registered, insured, licensed and bonded demolition contractors. This list changes periodically however, the most current version is located in Appendix 26. To be a registered demolition contractor, the following requirements must be met:

1. Liability insurance at a minimum of $1,000,000 in coverage
2. Surety bond in the mount of $10,000
3. Workman's compensation
4. Payment of annual registration fee

A member of the Will County Land Use Department will be responsible for providing a representative to monitor contractors. Contract monitoring verifies that the following actions are taking place:

- Debris being picked up is a direct result of the disaster
- Trucks hauling debris are fully loaded
- Debris pick-up areas are being managed properly
- Trucks are sticking to debris routes
- Inspection of temporary storage sites to ensure operations are being carried out according to contract
- Verification of security and control for temporary debris storage and reduction sites

Contracts and Contracting

The following types of contracts may be used in conducting debris management operations.

Time and Material: Under a time and material contract, the contractor is paid on the basis of time spent and resources utilized in accomplishing debris management tasks. The Federal Emergency Management Agency policy requires that the use of time and material contracts be limited to the *first 72 work hours* following a disaster event. A sample Time and Materials Contract can be found in Appendix 7.

Lump Sum: A lump sum contract establishes the total price using one item bud from a contractor. It should be used only when a scope of work is clearly defined, with areas of work and quantities of material clearly identified. Lump Sum contracts can be defined in one of two ways:

Area Method: where the scope of work is based on a one time clearance of a specified area, or

Pass Method: where the scope of work is based on a certain number of passes through a specified area, such as a given distance along a right of way.

A sample lump sum contract is located in Appendix 8.

Unit Price: A unit price contract is based on weight (tons) or volume (cubic yards) of debris hauled, and should be used when the scope of work is not well defined. It requires close monitoring of collection, transportation, and disposal to ensure that quantities are accurate. A unit price contract may be complicated by the needs to segregate debris for disposal. A sample Unit Price contact is located in Appendix 9.

Qualified Contractors

A list of certified contractors for Will County is maintained by the Land Use Department and contains separate categories for types of work (Appendix 26). Contractors will be used for specialized equipment or the quantity exceeds the ability of County and local government.

Right-of-Entry/Hold Harmless Agreements

Disaster response activities may require entering private property to remove debris that is a threat to the health and safety of occupants. Entry onto private property will be made only when absolutely necessary. Agreements will be necessary to protect private and public interest.

The Will County State's Attorney will provide legal counsel and review of all proposed agreements.

Sample Right-of-Entry and Hold Harmless Agreements can be found in Appendix 6.

Avoidance Checklist

Jurisdictional officials must be aware of the pitfalls of 'contracting' and ensure that all personnel involved in oversight of the debris management efforts are aware of the following:

- **DO NOT:** Award a debris removal contract on a sole-source basis.
- **DO NOT:** Sign a contract (including one provided by a contractor) until it has been thoroughly reviewed by your legal representative.
- **DO NOT:** Allow any contractor to make eligibility determinations, since only FEMA has that authority.
- **DO NOT:** Accept any contractor's claim that it is "FEMA Certified." FEMA does not certify, credential, or recommend debris contractors.
- **DO NOT:** Award a contract to develop and manage debris processing sites unless you know it is necessary, and have contacted the state for technical assistance concerning the need for such operations. Temporary debris storage and relocation sites are not always necessary.
- **DO NOT:** Allow separate line item payment for stumps 24 inches and smaller in diameter; these should be treated as normal debris.
- **DO NOT:** "Piggyback" or utilize a contact awarded by another entity. Piggybacking may be legal under applicable state law; however, the use of such contracts may jeopardize FEMA funding.
- **DO NOT:** Award pre-disaster/stand-by contracts with mobilization costs or unit costs that are significantly higher than what they would be if the contract were awarded post-disaster. Such contracts should have variable mobilization depending upon the size of the debris and work that may be encountered.

DOCUMENTATION

Documentation of debris management activities is **extremely important** for potential reimbursement of cost. It is important to record all debris activities performed, costs and authorization granted. Copies needed to be maintained for a historical record and for reference in updating plans.

Documentation of activities and costs associated with debris is the responsibility of those performing work at all levels of government (County, City, Villages, and Townships) as well as those who provide oversight and direction.

Each jurisdiction must maintain complete and accurate records of the jurisdictions cost for debris removal in order to justify costs for reimbursement under the state and federal disaster assistance rules.

At a minimum, documentation needs to address the following:

- Labor, equipment, rental fees and material costs
- Mutual-aid agreement expenses
- Use of volunteered resources, including labor
- Administrative expenses
- Disposal costs
- Types of debris collected, amounts of each type, and location of origin.

Documentation must also meet State and/or FEMA standards in order for reimbursement of expenses to be approved.

STATE AND FEDERAL ASSISTANCE

WCEMA will request State assistance with the debris-generating event exceeds Will County's in-house debris clearing, removal, and disposal capabilities. The request for State resources will be submitted to IEMA.

Previous disasters generating debris allowed us to use State assets such as prisoners to assist with the removal of debris. Prisoners were provided to move debris to the right of way and then into the appropriate vehicle for disposal.

When events are declared Federal disasters, local governments are eligible for funding through the Federal Emergency Management Agency's (FEMA) Public Assistance program. This program typically reimburses units of government at 75% of the eligible cost to respond to a disaster. However, this reimbursement depends on keeping decent records of all activities and expenses during a response.

The Federal Highway Administration (FHWA) administers the Emergency Relief (ER) Program, which provides assistance to State and local governments with repairs to roads/bridges damaged and debris removal operations during disasters. These funds are only available on streets classified as Federal Aid Roads. These funds can be used for both emergency and permanent repairs, these funds are granted based on inspections performed following the storm event. FHWA will only provide reimbursement for the initial clearing and the first round of debris removal/disposal of the road right-of-way. FEMA will only reimburse certain debris disposal costs on these streets only after FHWA debris amounts have been deducted for payment.

ORGANZATION AND ASSIGNMENT OF RESPONSIBILITEIS

WILL COUNTY EMERGENCY MANAGEMENT AGENCY

The Will County Emergency Management Agency will activate the Debris Management Team, as necessary and provide updates to the team on disaster situation and known debris issues. Will County Emergency Management agency has the responsibility to prepare and submit debris calculations and requests for assistance for IEMA and FEMA. Will County EMA will provide information to the County PIO for publication and distribution. Additionally, Will County EMA will develop the County Debris Management Plan and assists the jurisdictions with the development of local plans.

WILL COUNTY DIVISION OF TRANSPORTATION

The Will County Division of Transportation (WCDOT) is responsible for the debris removal function on County Highways. The WCDOT 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 WCDOT will be responsible for removing debris from the public right-of-way of County highways and will assist others after County roads are cleared. WCDOT will further stage equipment in strategic locations locally as well as regionally, if necessary to protect the equipment from damage, preserve the decision maker's flexibility for employment of the equipment of the equipment, and allow for the clearing crews to begin work immediately after the disaster. The WCDOT will assess debris issues in the right-of-way of county highways; they will also assist on other county roads and provide debris clearance personnel and equipment, as available.

WILL COUNTY LAND USE - DIVISION OF RESOURCE RECOVERY AND ENERGY

Will County Land Use Division of Resource Recovery and Energy will coordinate with the County Debris Manager (appointment of a Debris Manager will be made upon activation of the Debris Management Team.) Provides guidance on the environmental issues, assists with recycling, and aids in the disposal of waste in the County in accordance with the Illinois Environmental Protection Agency's (IEPA) Environmental Protection Act. Land Use will provide a monitor for the Temporary Debris Storage and Reduction Site (TDSR).

Will County Land Use will 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.

WILL COUNTY HEALTH DEPARTMENT – DIVISION OF ENVIRONMENTAL HEALTH

The Will County Health Department will assist in the identification of health issues, inspect and coordinate appropriate actions by food service and food stores in addressing spoiled food. Additionally, they will provide monitors for temporary debris storage and reduction sites, as needed. The Will County Health Department will provide information about health risks and safety procedures to the team and to the County PIO for publication and distribution.

WILL COUNTY SHERIFF

The Will County Sheriff will designate an officer to serve with the team to provide site security as well as provide site security at the temporary debris sites.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA) REPRESENTATIVE

The IEPA will coordinate with State and Federal agencies, such as the EPA and the Illinois Historic Preservation office to ensure compliance with environmental and historic preservation laws/regulations/policies. They will evaluate and assist in selecting locations for the temporary debris reduction site as well as determine appropriate environmental monitoring and ensure compliance with reporting requirements for the sites. They will aid in securing the necessary permits for this operation.

AFFECTED JURISDICTIONS AND TOWNSHIPS

Officials of affected jurisdictions are to develop a local Debris Management Plan for their jurisdiction or participate in a joint plan for multiple jurisdictions in the area. Jurisdictions are to clear roadways and access debris to be collected as possible. Jurisdictions should coordinate local debris operations through the county strategy and distribute debris separation instructions and collection schedules to residents. Affected jurisdictions should maintain proper documentation of local expenses for purposes of reimbursement and historical records. Each jurisdiction must maintain a separate record as they apply for disaster assistance by jurisdiction.

WILL COUNTY ANIMAL CONTROL

Will County Animal Control will assist with pets or farm animals needing assistance in the form of sheltering.

WILL COUNTY FOREST PRESERVE

Will County Forest Preserve will provide maintenance staff to support the removal of debris from the right-of-ways and aid in the recovery and restoration of public property.

WILL COUNTY EXECUTIVE

As the expense of this operation can magnify rapidly, the Will County Executive will need to authorize the necessary expenditures for the debris removal operations. In addition, they will be coordinating with the County PIO to release information to the public.

PUBLIC INFORMATION OFFICER

The Public Information Officer (PIO) will coordinate with county and local officials to release debris collection information, they will prepare announcements and media releases throughout the event to keep the public informed.

WILL COUNTY STATE'S ATTORNEY

The Will County State's Attorney will review insurance information and other assets to ensure benefits and resources are fully utilized. They will review all contracts to ensure compliance with FEMA requirements as well as right-of-way and hold harmless agreements. Furthermore, they will ensure compliance with historical preservation issues.

PRIVATE CITIZENS

Will County residents will be invaluable at this time. Residents will assist themselves and their neighbors in the collection, separation, drop-off of debris. Residents will be encouraged to report any dangerous debris to local law enforcement.

The following functions are necessary during an emergency requiring the need for debris removal.

Administration: Housekeeping, supplies, equipment, funding, and accounting.

Contracting and Procurement: Bidding requirements, forms, advertisements for bids, instructions to bidders, contact development.

Legal: Contract review, right of entry permits, community liability condemnation of buildings, land acquisition for temporary staging and reduction sites, land acquisition for disposal sites, insurance.

Operations: Responsible for safety of Debris Management Teams and their tactical response, supervision of government and contract resources and overall project management.

Engineering: Detailed damage assessment, identification of project tasks, assignments of tasks, preparation of estimates, plans, specifications, and recommendation of contract award.

Public Information Specialist: Coordinate press releases, contacts with local organizations, individuals, and media; and public notices for debris removal and disposal contracts.

The staff shall coordinate with all local, State and Federal agencies responsible for disaster response and recovery operations. The staff will be assigned the task of:

1. Coordinate safety information pertaining to Debris Management to be included in the Incident Action plan (IAP) Safety Message.
2. Assembling to develop a Debris Management Plan.
3. Develop and analyze debris management capability.
4. Discourage development in hazardous zones.
5. Develop public information and education programs.
6. Train personnel in debris management techniques.
7. Maintain pre-disaster maps, blueprints, photos, and other documents
8. Make a list of critical facilities (streets, roads, and bridges).
9. Identify non-government groups that could assist.

DIRECTION AND CONTROL

ACTIVATION OF THE PLAN

County and Local Plans will be activated as soon as it is apparent that there is a significant amount of debris that requires immediate action. The team will be notified of the situation by the EMA Director, or designee, and certain members by be activated with the EOC staff. The County Debris Manager will work with the EOC Staff to coordinate activities with local jurisdictions, local Debris managers and IEPA representatives.

ESTABLISHMENT OF DEBRIS REMOVAL PRIORITIES

Will County has developed the following guidance for prioritizing debris removal:

1. Life safety
2. Situation Stabilization
3. Property Protection
4. Economic Stability and Environmental Protection

These guidelines will dictate planning, response, and recovery during disaster debris creating events.

ESTABLISHMENT OF DEBRIS CLEARANCE PRIORITIES:

1. **Clear Emergency Access Routes – Lifelines.** Lifelines are those routes in a traffic network that provide access for emergency responders, alternate and evacuation routes, and damage assessment routes. Lifelines should include areas identified for potential staging, temporary shelters, and other resources available in the community that support emergency response. Will County will work closely with jurisdictions and neighboring counties to identify priorities for clearing transportation access routes.
2. **Clear Access to Critical Facilities and Infrastructure.** Assets, systems, and networks, whether physical or virtual, so vital that their incapacitation or destruction would have a debilitating effect of security, economic security, public health or safety. These typically include hospitals, fire stations, police stations, and emergency operation centers, as well as cellular and land-line telephone services, drinking water and power utilities, and sanitation facilities.
3. **Clear Major Interstates or Principal Arterial Routes.** Major highways and arterial routs are portions of the public transportation network that are needed to aid in response and recovery operations, but may not have been cleared as an emergency access route.
4. **Clear Areas Minor Arterials.** These areas include those portions of the public transportation network necessary for effectively transporting goods and services throughout the Regions that are not included in one of the previous categories. These may include access to warehouses, airports, and major business districts.
5. **Clear Major Collector.** These routes include those portions of the public transportation network that receive moderate traffic flows, but are not included in one of the previous categories.
6. **Clear Minor Collector.** These areas include those portions of the public transportation network in residential neighborhoods that are not included in one of the previous categories.

Will County will follow the Roadway Functional Class as determined by Illinois Department of Transportation. An interactive map can be found on http://www.dot.illinois.gov/gettingaroundillinois/gai.htm?mt=fc

It should be noted that County assets will focus on County infrastructure while Township and municipal assets will focus on clearing debris in their affected areas based on the above priorities. In the event municipal or townships need additional assistance from the County, assets will be made available once priorities have been met.

ENVIRONMENTAL COMPLIANCE

Compliance with environmental protection laws and regulations is still required after disasters. Federal and State Environmental Protection Agencies and Local Health Departments should be consulted for applicable regulatory requirements.

Hazardous waste will be a significant issue in debris management strategy. The county, township, city or village will work closely with Federal and State Environmental Protection Agencies to ensure proper removal and disposal of hazardous waste. Procedures for establishing a separate staging area for hazardous waste, to include lining with an impermeable material so chemicals do not leak into the ground water and soil will need to be developed.

WEAPONS OF MASS DESTRUCTION/TERRORISM EVENT

The handling and disposal of debris generated from a Weapons of Mass Destruction (WMD) or terrorism event will exceed the capabilities of the County and will require immediate State and Federal assistance.

Normally, a WMD or terrorism event will, by its very nature, require all available assets and involve many more State and Federal departments and agencies. The nature of the waste stream, as well as weather or not the debris is contaminated, will dictate the necessary cleanup and disposal actions. Debris handling considerations that are unique to this type of event include:

- Much of the affected area will likely be a crime scene. Therefore, debris may be directed to a controlled debris management site by State and/or Federal law enforcement officials for future analysis.
- The debris may be contaminated by chemical, biological, or radiological contaminants. If so, the debris will have to be stabilized, neutralized, containerized, etc. before disposal. In such occurrence, the operations may be under the supervision and direction of a Federal agency and one of more specialty Contractors retained by the agency. The presence of contamination will influence the need for decontamination, packaging and transportation.
- The type of contaminant will dictate the requires capabilities of the personnel working with the debris. Certain contaminants may preclude deployment of resources that are not properly trained or equipped.
- The Debris Manager will continue to be the single point of contact for all debris removal and disposal issues within the County. Coordination will be exercised through the United States Army Corps of Engineers (USACE) ESF #3 Branch located at the designated FEMA Disaster Field Office.
- In this type of event, the County will become a supporting element to the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, and/or the Department of Energy and will operate as defined in the USACE WMD Emergency Response Plan.

CATASTROPHIC ANIMAL MORTUARY DISPOSAL

In the event of a foreign animal disease (FAD) outbreak or other natural or man-made disaster, Will County livestock and poultry producers could be faced with the task of large-scale mortality disposal and the disposal of other potentially contaminated materials associated with the FAD response and mitigation. The County, providing emergency response in these types of events, would be likely called on to support livestock and poultry producers who, for whatever reason, are not prepared to dispose of animals or associated materials on their property. Additional information can be found in Appendix 18.

ADMINISTRATION & LOGISTICS

TEMPORARY DEBRIS STORAGE AND REDUCTION (TDSR) SITE

Some specific considerations when using these types of sites include:

Location: Care should be taken in selection of TDSR sites. Land use, proximity to housing, location of the nearest water table and/or public water supply, and other factors what may impact the use of the site should be taken into account.

Operations: Monitoring receipt of debris and verifying types of debris received are critical functions for successful operation of a TDSR site. Included in the attachments to this document is a sample TSDR site layout.

Closeout: In order to close out a TDSR site, care should be taken to restore the site to its original condition in an environmentally friendly and timely manner. Included in the attachment to this document is a checklist for site closeout.

The efficiency and overall success of the TDSR operations are determined by how the site is designed. Significant accumulation of debris should not be allowed to occur at temporary storage sites because of environmental and safety concerns, such as the risk of fire. Additionally, permits for such sites may impose maximum capacity restrictions. While FEMA recommends 100 acres as the minimum size for debris management site, this will have to be altered due to facility availability within the County. Additional debris management sites may be necessary if actual debris quantities flowing into the site are greater than the site storage and processing capacity.

SITE PREPARATION

Develop a memorandum of Understanding, a Memorandum of Agreement, or lease/use agreement, if required.

Lined temporary storage area should be established for materials (including ash, household hazardous waste, fuels, and other materials) that can contaminate soils, groundwater, and surface water. When possible, plastic liners should be set up under stationary equipment, such as generators and mobile lighting plants. These should be included as a requirement in the scope of work if debris management site preparation will be contracted out. The topography and soil/substrate conditions should be evaluated to determine the best site layout. When planning for site preparation, the designer should consider ways to make sure closure and restoration easier. Upon site closeout, the uncontaminated soil can be re-spread to preserve the integrity of the tillable soils. Operations that modify the landscape, such as substrate compaction and over-excavation of soils when loading debris for final disposal, adversely affect landscape restoration. Identify who would be responsible for updating the initial baseline data and develop an operation layout to include ingress and egress routes.

Tracking of Resources

Tracking of resources is essential in order to obtain the most possible utilization from those available in the County. Will County EMA will utilize available technology and resources, such as WebEOC, for resource tracing. The level of detail in the tracking system will depend on the size and magnitude of the disaster. Will County EMA will assist the local jurisdictions as needed.

Meetings and Briefings

Meetings and briefings will be conducted by of through the County EOC. The main purpose of the meeting is to brief EOC staff on current and future debris management activities. Debris management staff personnel will attempt to participate in all EOC meetings, provide briefings as necessary, and provide the latest information available to the EOC staff.

Documentation Process

Debris management personnel will maintain records regarding planning and decisions made on debris management activities. This includes minutes of meetings, debris site selection, debris removal policies and priorities, demolition of public/private structures and others.

State Agency Support

Following is a list of state agencies that may participate in, or support, debris removal activities:

- Illinois Department of Transportation
- Illinois Environmental Protection Agency
- Illinois Department of Public Health – Office of Preparedness & Response
- Illinois Emergency Management Agency
- Illinois Department of Natural Resources
- Illinois Department of Agriculture
- Illinois National Guard
- Illinois Department of Corrections
- Illinois State Highway Patrol

Direct Federal Assistance

Direct federal assistance may be available during certain incidents; however, this applies to only emergency work (debris removal and emergency protective measures) and must meet general FEMA eligibility criteria. Debris activities that are eligible for Direct Federal Assistance include:

- Debris removal from critical roadways and facilities
- Debris removal from curbsides or from eligible facilities and hauling to either temporary or permanent sites.
- Identification, design, operation, and contractor's activities
- Demolition or removal of disaster damaged structures and facilities in accordance with FEMA regulations and policies.

Technical Assistance

State Technical Assistance is available to local officials for a variety of tasks related to debris planning. The Illinois Environmental Protection Agency, and Illinois Emergency Management Agency, can provide technical assistance in the following areas:

- County and Local Debris Management Plans
- Debris Management Site plans
- Contract/TDSR checklist
- Documentation aids

Federal Technical Assistance

Federal Technical Assistance may be available, and applies when a state or county lacks technical knowledge or expertise to accomplish an eligible task. The Federal Emergency Management Agency will then request technical assistance from the appropriate federal agency in the National Response Plan.

Eligible technical assistance includes:

- Assistance in developing an overall debris management plan
- Assistance in developing debris management site plans
- Assistance in developing of monitoring plans
- Assistance in developing contract guidelines
- Assistance in developing and implementing trip tickets process

Agencies that may be assigned missions from the Federal Government:

- Federal Emergency Management Agency

- Federal Highway Administration
- United States Department of Agriculture
- United States Environmental Protection Agency
- United States Army Corps of Engineers
- United States Coast Guard

Volunteer Organizations

Volunteer organizations may provide assistance for debris removal from private property. There is a wide range of volunteer organizations at the local, state, and federal level. The following is an incomplete list of organizations:

- American Red Cross
- Citizen Corps
  - Community Emergency Response Teams (CERT)
  - Medical Reserve Corps (MRC)
- Salvation Army
- Voluntary Organizations Active in Disaster (VOAD)
- Civic Clubs
- Student Organizations
- Church Organizations

PLAN DEVELOPMENT AND MAINTENANCE

The Directors of Will County EMA, Land Use Department, Division of Transportation, and the Health Department's Environmental Health Division are responsible for updating this plan based on deficiencies identified through actual events, drills and exercises, and changes in government structure and emergency organizations. The Will County EMA Director will prepare, coordinate, publish and distribute necessary changes and revisions to this plan.

AUTHORITIES AND REFERENCES

AUTHORITIES

- 44 CFR (Code of Federal Regulations) part 13, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments
- 44 CFR Part 206, Disaster Assistance (subparts G-L pertain to Public Assistance Program)

REFERENCES

- Debris Management Guide, FEMA 325, July 2007
- Public Assistance Policy Digest, FEMA 321, January 2008
- Public Assistance Guide, FEMA 322, June 2007
- FEMA Debris Management Course (G202)

APPENDIX

01 – Debris Forecasting
02 – Sample Mutual Aid Agreement
03 – Sample Load Tickets
04 – Debris Removal from Private Property
05 – Duplication of Benefits
06 – Hold Harmless Agreement & Right-of-Entry
07 – Time and Materials Contract
08 – Lump Sum Contract for Debris Removal
09 – Unit Price Contract for Debris Removal
10 – Temporary Debris Storage and reduction (TDSR) Site Checklist, Issues, and Layout
11 – Temporary Construction and Demolition Staging/Transfer Site Guidelines
12 – Chipping and Grinding Site Locations and Operations
13 – Burn Site Locations and Operations
14 – Guidelines for Land Application of Wood Ash from Burn Sites
15 – Guidelines for Reducing the Potential for Spontaneous Combustion in Compost of Mulch Piles
16 – Will County Landfills
17 – Catastrophic Animal Mortuary Disposal Guidelines
18 – Illinois Environmental Protection Agency's Open Burning of Disaster Debris – Information Statement
19 - State of Illinois Fact Sheet – Debris Issues from Storms or Floods
20 - FEMA Disaster Assistance Policy
21 - FEMA Fact Sheet – Debris Contracting Guidance
22 – Will County Burn Ordinance
23 - Will County Purchasing Ordinance
24 – Will County Contractor Listing
25 – IPWMAN By-Laws (Revised October 2012)
26 – Will County Hazard mitigation Plan – Hazard Modeling

APPENDIX 1 – DEBRIS FORCASTING

After the disaster parameters and geographic extent is established, specific debris volumes can be quantified by using historical information or forecasting models.

Historical records provide a basis for forecasting disaster-generated debris and can be used for planning purposes. Previous contracts for debris removal, recycling activities, volume-reduction processing, and landfill disposal records should be reviewed thoroughly to determine the quantity of disaster debris that was generated for a particular disaster event.

If previous disaster data is not available, assumptions may be made from neighboring jurisdictions' experience, or from USACE modeling. USACE emergency management staff has developed a modeling methodology designed to forecast potential amounts of hurricane-generated debris. This model is applicable across all disaster scenarios. Based on data from Hurricanes Frederic (1979), Hugo (1989) and Andrew (1992), the methodology has predicted accuracy of plus/minus 30 percent.

Estimating the amount of debris during an event will assist with debris removal priorities, storage site selection, and public assistance.

BUILDINGS

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

Residential Buildings

A formula for estimating the debris quantities from a demolished single-family home and associated debris is:

L' x W' x S x .20 x V = cubic yards (cy)

Where:
L = Length of building in feet
W = Width of building in feet
S = Height of building expressed in stories
V = Vegetative Cover Multiplier

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

Vegetation Cover	Value of (V) Multiplier	Description
Light	1.1	Includes new home developments where more ground is visible than trees. These areas will have sparse canopy cover.
Medium	1.3	Generally has a uniform pattern of open space and tree canopy cover. This is the most common description for vegetative cover.
Heavy	1.5	Is found is mature neighborhoods and woodlots where the ground or houses cannot be seen due to the tree canopy cover.

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

25-30 cy	Homes without a basement
45-60 cy	Homes with a basement

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

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

Outbuildings

All other building volumes may be calculated by using the following formula:

L' x W' x H' x 0.33 = ____ cubic yards of debris 27

Where:
L = length of building in feet
W = width of building in feet
H = height of building expressed in feet
0.33 is a constant to account for the "air space" in the building
27 is the conversion factor from cubic feet to cubic yards

Vegetation

Vegetation is the most difficult to estimate due to the random size and shapes of trees and shrubbery. Based on historical events, USACE has established a few rules of thumb in forecasting and estimating vegetative debris.

- Treat debris piles as a cube, not a cone, when estimating
- 15 trees, 8 inches in diameter = 40 cy (average)
- One acre of debris, 3.33 yards high = 16,117 cy

Volume – Weight Conversion Factors

These factors to convert woody debris from cubic yards to tons are considered reasonable and were developed by USACE.

Softwoods	6 cubic yards = 1 ton
Hardwoods	4 cubic yards = 1 ton
Mixed debris	4 cubic yards = 1 ton
Construction & Demolition	2 cubic yards = 1 ton

To verify these conversion factors in the field, several truckloads may be tested. Trucks should be well loaded contain woody debris typical of that being removed, and truck capacities should be verified. It is recommended that testing be performed with all affected parties present.

Estimating Debris Quantities

The following formula will aid in estimating the total amount of debris.

$$Q=H(C)(V)(B)(S)$$

Where:

Q – quantity of debris in cubic yards

H – number of Households

C – storm category

V – vegetation

B – commercial/business/industrial

S – storm precipitation

Determine the number of households (H)

- Determine the population (P) of an area
- Assume 3 persons per household (H)
- Population (P)/3 = Household (H)

Determine the storm category (C)

Tornado/Hurricane Category	Value of (C) Factor
1	2 cy
2	8 cy
3	26 cy
4	50 cy
5	80 cy

Determine the vegetation (V)

Vegetation Cover	Value of (V) Multiplier
Light	1.1
Medium	1.3
Heavy	1.5

Determine the commercial density of the area (B)

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

Determine the storm precipitation (S)

Precipitation Characteristics	Value of (S) Multiplier
None to Light	1.0
Medium to Heavy	1.3

Quick Reference for Roadside Debris Piles

Length	Width	Height	Volume
10’	10’	4’	15cy
20’	10’	4’	30cy
30’	10’	4’	45cy
40’	10’	4’	60cy
50’	10’	4’	75cy

Site Selection Requirements

- Estimate that debris pile stacks will be 10 feet high
- 60% of land is provided for roads, buffers, etc...
- Volume of debris per acre = 16,117
    - Q=16,177/acre
- Roads and buffers = 1.66
    - Acres for debris (1.66) = acre for storage site

APPENDIX 2 – SAMPLE MUTUAL AID AGREEMENT

THIS AGREEMENT, entered into this____day of _____by the participating parties hereto:
WHEREAS, each of the parties hereto desires to furnish mutual aid to each other in the event of a disaster, for which neither party might have sufficient equipment or personnel to cope, and,

WHEREAS, such a mutual aid agreements are authorized by Will County.

NOW THEREFORE, the parties do mutually agree as follows:

ARTICLE 1
TERM

This agreement shall commence at 12:01 a.m. on _____, and continue through _____ _____, subject to the right of each party to terminate sooner as provided herein.

ARTICLE 2
SERVICES

In the event of a disaster that requires aid of equipment and personnel beyond that which each party is able to provide for itself, all parties hereto agree that at the request of any party Hereto the others will loan such equipment and personnel as the respective officials of the lending jurisdiction, in their discretion, shall determine can be reasonably spared at the time without placing their own community in jeopardy.

Since time is of the essence during emergencies as herein referred to, the authority to dispatch equipment and personnel or call for in accordance with the terms and conditions of this agreement shall be delegated specifically to the chief official or acting chief official of the parties hereto.

The lending party shall be responsible for the delivery of said equipment and personnel to the location specified by requesting party.

Upon arrival at said location, the officer in charge of the said equipment and personnel shall report to the officer in charge at the location of the disaster, who shall assume full charge of all operations at a disaster or emergency location.

All equipment and personnel loaned hereunder shall be returned upon demand of the lending party or when released by the requesting party upon the cessation of the emergency.

ARTICLE 3
PAYMENT

No charge shall be assessed for services rendered by any party hereto.

ARTICLE 4
WAIVER OF CLAIMS

Each party hereto hereby waives all claims against the other for compensation for any loss, damage, personal injury, or death occurring in consequence of the performance of either party, their agents, or employees hereunder.

ARTICLE 5

TERMINATION

This Agreement may be terminated by either party upon at least thirty days prior written notice to the other.

ARTICLE 6

INTEGRATION

This Agreement contains the entire understanding between the parties, and there are no understandings or representations not set fourth or incorporated by reference herein. No subsequent modifications of this Agreement shall be of any force or effect unless in writing signed by the parties.

ARTICLE 7

COMPLIANCE WITH LAWS

In the performance of this Agreement, each party shall comply with all applicable Federal, State, and Local laws, rules, and regulations.

ARTICLE 8

SIGNATURES OF AGREEING OFFICIALS

Agreed upon by the Will County Board on ____ day of _____, 20____

_____

Nancy Schultz Voots

Will County Clerk

_____

Lawrence M. Walsh

Will County Executive

ive nature

WASTE MANAGEMENT

1045359

Laraway RDF
21233 W. Laraway Rd
Joliet, IL, 60436
Ph: 815 727 6148

Reprint
Ticket# 729851

ustomer Name	WM IL SOUTH ROLLOFF WM IL SOU	Carrier	XWMBANNERWEST XWM-WM-BANNER/WESTERN
icket Date	02/02/2016	Vehicle#	65302620c Volume 20.0
ayment Type	Credit Account	Container	
anual Ticket#		Driver	
auling Ticket#		Check#	
oute		Billing #	0001678
tate Waste Code		Gen EPA ID	
anifest	1		
estination		Grid	
O			

rofile 105645IL (NON HAZARDOUS WASTEWATER TREATMENT SOLIDS)
enerator 117-LIQUID ENVIR SOLUTIONS IL LIQUID ENVIRONMENTAL SOLUTIONS OF ILLINOIS INC

	Time	Scale	Operator	Inbound		
n	02/02/2016 07:42:13	Inbound 2	trork		Gross	65200 lb
ut	02/02/2016 07:42:13		trork		Tare	44560 lb
					Net	20640 lb
					Tons	10.32

omments

roduct	LD%	Qty	UOM	Rate	Tax	Amount	Origin
Declassified SPW-T	100	10.32	Tons				COOK

404WM-N

Total Tax
Total Ticket

WASTE MANAGEMENT

Prairie View RDF
29755 S. Prairie View Drive
Wilmington, IL, 60481
Ph: (815) 423-5120

Original
Ticket# 496333

11877893

Customer Name HOMEWOOD WM JOLIET TRANSFER H
Ticket Date 02/03/2016
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest
Destination
PO
Profile ()
Generator

Carrier MARINA MARINA CARTAGE
Vehicle# 128-034 Volume
Container
Driver
Check#
Billing # 0000337
Gen EPA ID
Grid

	Time	Scale	Operator	Inbound		
In	02/03/2016 06:52:09	Inbound	bsusan		Gross	80580 lb
Out	02/03/2016 06:52:09		bsusan		Tare	31220 lb
					Net	49360 lb
					Tons	24.68

Comments

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 1005T-MSW TRANSFER	100	24.68	Tons				JOLIET - W

Total Tax
Total Ticket

Driver`s Signature

463WMM

APPENDIX 4 – DEBRIS REMOVAL FROM PRIVATE PROPERTY

There are many considerations in debris removal to ensure that the debris removal activities of the jurisdiction comply with FEMA eligibility policies and debris removal guidance.

Removal of eligible debris for private property:

Reference see FEMA Publication 325 entitled '*Debris Removal Guide'.*

Issues regarding removal of debris from private property are common. Problems may arise regarding the definitions of 'public health and safety'.

Removal of debris from private property is primarily the responsibility of the *individual property owner*, aided by insurance settlements or volunteer organizations.

Jurisdictions (applicants) must be aware of FEMA's guidance and eligibility rules. The following items need to be understood and considered by the authorities when setting local clean-up policies:

- Applicants must be aware of the limitations of debris removal from private property early in the disaster.
- Be aware that only FEMA makes eligibility determinations regarding removal of debris from private property. FEMA's representative on the ground will make this determination after consideration of all issues.
- If FEMA determines that debris is so widespread that removal from private property is appropriate the applicant must ensure that specific requirements (right-of-entry, insurance, release from liability, etc.) are complied with before removal of the debris.
- Ensure that the term 'economic recovery of the affected areas' is not being misapplied. Use of this criterion is normally restricted to removal of disaster-related debris from large commercial areas to expedite restoration of the economic viability of the affected community.
- Ensure that the determination that a 'public health and safety issue exists' in NOT based on building codes. Generally, the determination would be based on ordinances related to condemnation.
- Ensure that there is a clear understanding that a public health and safety hazard must exist for the removal of the debris to be eligible. Again, FEMA will make the final determination for removal from private property.
- Concrete slabs or foundations-on-grade do not present a health or safety hazard to the general public except in very unusual circumstances, such as erosion under a concrete slab on a hillside.
- Broken slabs or slabs incapable of supporting a new structure, do not constitute a public health or safety hazard. Costs of removing substantially damaged structures, as well as associated slabs, driveways, fencing, garages, and similar appurtenances, are eligible when the property is part of a Section 404 Hazard Mitigation buyout and relocation project.

Eligibility of Curbside Pick-up:

Debris may continue to accumulate as residents bring debris from their properties to public rights-of-way. Normally this will occur in three stages:

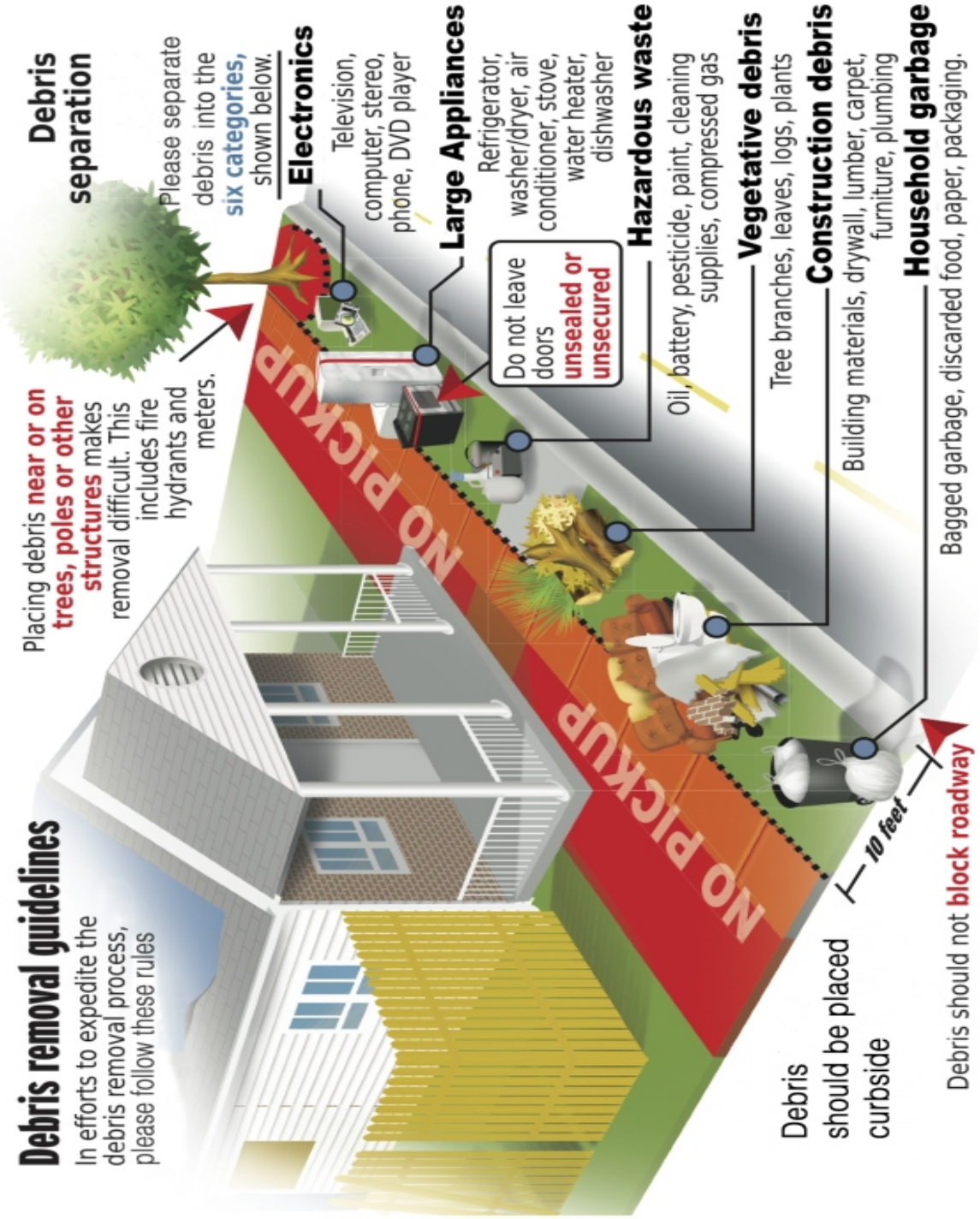
1. Woody debris and yard waste moved to the right-of way.
2. Household waste, such as damaged personal goods, moved to the right-of way.

3. Construction and demolition materials removed by the homeowner prior to receipt of insurance and individual assistance payments.

The following curbside policies and issues must be considered:

- **Residents <u>must not</u> mix garbage with debris.** Debris deposited at the curbside must be disaster-related to be eligible for pickup and disposal by the jurisdiction. The jurisdiction should resume normal garbage pick-up schedules as soon as possible.
- Construction and demolition materials from minor and major repairs of reconstruction by contractors <u>should not</u> be deposited at the curbside. Contractors should remove and deposit the debris at approved landfills.
- Insurance proceeds usually cover the cost for demolition debris removal from private property. Remember, only disaster-related debris removal costs *not covered* by insurance are eligible for reimbursement.
- Deadlines for curbside pickup must be coordinated with appropriate State and FEMA officials and announced to the public as soon as practical following the event. Normally a 72 hour period following the end of the disaster event would be allowable. Any time extension given to State applies only to disaster-related debris.

Homeowners' Insurance Coverage for Debris Removal:
Essentially all general homeowner's insurance policies contain a provision for the pick-up of debris resulting from damages to a facility covered by the policy. That usually includes structures, fences, playground equipment, etc., but maybe not the removal of vegetative debris. The insurance policy must be checked to determine whether or not it covers vegetative debris. If removal of vegetative debris is not covered by insurance that does not mean that it is eligible for federal funding.



FEMA
www.fema.gov

APPENDIX 5 - DUPLICATION OF BENEFITS

In accordance with Section 312 of the Stafford Act, no applicant will receive assistance for any loss for which financial assistance has been received under any other program or from insurance or from any other source. Therefore, the use of Federal or State funds, insurance settlements, and other grants or cash donations granted for the same purpose constitutes a duplication of benefits.

Other Federal Agencies

If another Federal agency has the authority to provide an applicant with assistance for debris removal operations, FEMA cannot provide funds for that project. Applicants should pursue funding assistance offered through those agencies.

The Federal Highway Administration (FHWA), United States Army Corps of Engineers (USACE), National Resources Conservation Service (NRCS), Environmental Protection Agency (EPA), Department of Housing and Urban Development (HUD), and United States Coast Guard (USCG) may provide assistance to applicants for certain debris removal activities. Applicants must become aware of the agencies' roles, responsibilities, and jurisdictions to ensure a duplication of benefits does not occur between other Federal agencies and FEMA. Descriptions of other Federal agencies and their programs are found in Appendix G, FEMA RP9580.202, Fact Sheet: Debris Removal - Authorities of Federal Agencies.

Insurance Settlements

Insurance policies that include coverage for debris removal activities are potentially a duplication of benefits. The applicant should contact its insurance provider for a statement of loss to determine the amount of insurance settlement related to debris removal. The insurance settlement is reflected in the Public Assistance grant as a line-item credit against the eligible cost for the project.

Similarly, applicants should be aware that some residents within a declared disaster area may obtain funds for removing debris from their property through their homeowner insurance or Chapter 1 – Public Assistance Debris Removal Eligibility FEMA 325, Public Assistance Debris Management Guide Page 11 under the FEMA Individual Assistance (IA) Program. Should residents receive funds under the IA Program or insurance proceeds for the removal and disposal of debris from their properties, but also place debris at the curbside rights-of-way, the applicant should make a concerted effort to collect the proportionate cost of the curbside removal from those residents in an effort to comply with Section 312 of the Stafford Act.

While FEMA understands that this could become an arduous task, applicants can put in place protocols to inform residents that receiving a benefit for the same purpose from the Federal government or any other source is in violation of Federal law.

When applicants receive reimbursements from residents for the cost of curbside collection, applicants are required to report the total amount of proceeds collected from those residents to FEMA. The Federal share of the Public Assistance grant is calculated after the reimbursement proceeds are reduced from the total cost of the curbside collection.

Salvage Value

Applicants may choose to recover materials from disaster debris for beneficial uses. Applicants may sell materials such as metals, woody debris, concrete, masonry, or other types of debris to recyclers, to the construction or agricultural industry, or to energy generators. The salvage value for various recyclable or reusable debris materials depends on the regional recycling markets.

Applicants that sell disaster debris for a salvage value must offset the cost of the eligible debris removal work by the revenues received from the sale of the debris. Applicants must document and report to FEMA the revenues obtained through the sale of debris materials. Public Assistance grant funding is limited to

the Federal share of the difference between the amount of revenue received and the cost of the debris removal.

Applicants that contract for debris removal may allow the contractor to take possession of the recoverable debris materials. This type of agreement must take into account the salvage value, and the applicant should negotiate a credit to reflect this value within the terms of the contract. The sale of the recoverable disaster debris materials should offset the cost of the contracted services.

APPENDIX 6 - HOLD HARMLESS AGREEMENT & RIGHT-OF-ENTRY

Hold Harmless Agreement

"(Insert Agency Name), its successors and assigns, hereby agrees to save and hold harmless the (Insert Agency Name) and any of its employees from all costs, injury and damage incurred by any of which is caused by an activity, condition or event arising out of the performance, preparation for performance or nonperformance of any provision of this agreement by (Insert Agency Name).

The above cost, injury, damage or other injury or damage incurred by or to any of the above shall include, in the event of an action, court costs, expenses of litigation and reasonable attorney's fees. This save harmless clause is not intended to indemnify against any cost or damage, or portion thereof, caused by (Insert Agency Name)".

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands this _____day of _____, 20_____.

_____

Nancy Schultz Voots

Will County Clerk

_____

Lawrence M. Walsh

Will County Executive

Right-of-Entry Agreement

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

Identified as_____, _____,
(Street) (City/town)

_____, _____WILL_____, State of Illinois
(Township) (County)

do hereby grant and give freely and without coercion, the right of access and entry to said property in the County/City of _____, its agencies, contractors, and subcontractors thereof, for the purpose of removing and clearing any or all storm-generated debris of whatever nature from the above described property.

It is fully understood that this permit is not an obligation to perform debris clearance. The undersigned agrees and warrants to hold-harmless the City/County of_____WILL____, State of Illinois, its agencies, contractors, and subcontractors, for damage of any type, whatsoever, either to the above described property or persons situated thereon and hereby release, discharge, and waive any action, either legal or equitable that might arise out of any activities on the above described property. The property owner(s) will mark any storm damaged sewer lines, water lines, and other utility lines located on the described.

I/We (have____, have not_____) (will_____, will not____) receive any compensation for debris removal from any other sources including Small Business Administration, National Resource Conservation Service, private insurance, individual and family grant program or any other public assistance program. I will report for this property any insurance settlements to me or my family for debris removal that has been performed at government expense. For the considerations and purposes set forth herein, I set my hand this_____day of_____, 20___.

_____ _____

Witness Owner

_____

_____

_____

Owner Telephone Number and Address

APPENDIX 7 – TIME AND MATERIALS CONTRACT

ARTICLE 1
AGREEMENT BETWEEN PARTIES

This contract is entered into on this_____day of _____, 20___, by and between the city/county of __WILL_____, hereinafter called the ENTITY and_____, hereinafter called the CONTRACTOR.

ARTICLE 2
SCOPE OF WORK

This contract is issued pursuant to the Solicitation and Procurement on _____

_____, 20___, for the removal of debris caused by the sudden natural or man-made disaster of _____to _____, 20___. It is the intent of this contract to provide equipment and manpower to remove all hazards to life and property in the affected communities. Clean up, demolition, and removal will be limited to 1) that which is determined to be in the interest of public safety and 2) that which is considered essential to the economic recovery of the affected area.

ARTICLE 3
SCHEDULE OF WORK

Time is of the essence for this debris removal contract.

Notice to proceed with Work: The work under this contract will commence on _____, 20_____. The equipment shall be used for (recommended not to exceed 70) hours, unless the ENTITY initiates additions or deletions by written change order. Based upon unit prices of equipment and labor, no minimum or maximum number of hours is guaranteed.

ARTICLE 4
CONTRACT PRICE

The hourly rates for performing the work stipulated in the contract, documents, which have been transposed from the low bidder's bid schedule, are as follows:

Equipment/Machine/Operator	*Mobilization/Demobilization Cost*	*Hourly Rate*

Manufacturer, Model, and Total unit rate shall be given which includes maintenance, fuel, overhead, profit, and other associated cost with the equipment.

Estimated Cost per unit of material. Only actual invoice amounts will be paid.

Labor man-hours shall include protective clothing, fringe benefits, hand tools, supervision, transportation, and any other costs.

ARTICLE 5:
PAYMENT

The ENTITY shall pay the Contractor for mobilization and demobilization if the Notice to Proceed is issued and will pay for only the Time that the equipment and manpower is actually being used in accomplishing the work. The Contractor shall be paid within ___ days of the receipt of a pay estimate and verification of work by the inspector.

ARTICLE 6:
CLAIMS

Not Applicable

ARTICLE 7:
CONTRACTOR'S OBLIGATIONS

The Contractor shall supervise accomplishment of the work effort directed by labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the Contractor. Additionally, the Contractor shall pay for all materials, personnel, liability insurance, taxes, and fees necessary to perform under the terms of the contract.

Caution and care must be exercised by the Contractor not to cause any additional damage to sidewalks, roads, buildings, and other permanent fixtures.

ARTICLE 8:
INSURANCE AND BONDS

The Entity's representative(s) shall furnish all information necessary for commencement of the Work and direct the Work effort. Costs of construction permits, disposal sites and authority approvals will be home borne by the Entity. A representative will be designated by the Entity for inspection the work and answering any on-site questions. This representative shall furnish the Contract daily inspection reports including work accomplished and certification of hours worked.

The Entity shall designate the public and private property areas where the work is to be performed. Copies of complete "Right of Entry" forms, where they are required by State or local law for private property shall be furnished to the contractor by the Entity. The Entity shall hold-harmless and indemnify the Contractor and his employees against any liability for any and all claims, suits, judgments, and awards alleged to have been caused by services rendered under this contract for disaster relief work unless such claims are the result of negligence on the part of the Contractor.

The Entity will terminate the contract for failure to perform or default by the Contractor.

ARTICLE 9:
INSURANCE AND BONDS

The Contractor shall furnish proof of Worker's Compensation Coverage, Automobile Liability Coverage, and Comprehensive General Liability Insurance (Premises-Operations, Personnel Injury, etc, as deemed necessary by the Entity).

Surety: The Contractor shall deliver so the Entity fully executed Performance and Payment Bonds in the amount of 100% of the contract amount, if required by the specifications, general or special conditions of the contract. The Entity will reimburse the Contractor for the costs of the bonds, the costs of which will be included in the base bid.

ARTICLE 10:

CONTRACTOR QUALIFICATIONS

The Contractor must be duly licensed in the State per statutory requirements.

THIS CONTRACT IS DULY SIGNED BY ALL PARTIES HERETO:

Entity - WILL COUNTY

By_____ Seal
Principal of the firm

by_____ Seal
Contractor

Address _____

City & State _____

_____

NANCY SCHULTZ VOOTS

WILL COUNTY CLERK

_____

LAWRENCE M. WALSH

WILL COUNTY EXECUTIVE

Approved this ___ day of _____, 20____.

APPENDIX 8 – LUMP SUM CONTRACT FOR DEBRIS REMOVAL

ARTICLE 1
AGREEMENT BETWEEN PARTIES

This contract is made and entered into on this __day of _____, 20____, by and between the city/county of _____, hereinafter called the ENTITY and _____ _____, herein after called the CONTRACTOR.

ARTICLE 2
SCOPE OF WORK

This contract is issued pursuant to the Solicitation and Procurement on _____, 20, for the removal of debris caused by the sudden natural or manmade disaster of _____ to _____, 20____. It is the intent of this contract to provide equipment and manpower to remove all hazards to life and property in the affected communities. Clean up, demolition, and removal will be limited to 1) that which is determined to be in the interest of public safety and 2) that which is considered essential to the economic recovery of the affected area.

ARTICLE 3
SCHEDULE OF WORK

Time is of the essence for this debris removal contract.

Notice to proceed with the Work: The Work under this contract will commence on_____, 20_____. Maximum allowable time for completion will be _____ calendar days, unless the Entity initiates additions or deletions by written change order. If the Contractor does not complete work within the allotted time, liquidated damages will be assessed in the amount of _____ per day.

ARTICLE 4
CONTRACT PRICE

The lump sum price for performing the work stipulated in the contract document is. $_____._____.

ARTICLE 5
PAYMENT

The Contractor shall submit certified pay requests for completed work. The Entity shall have 10 Calendar

Days to approve or disapprove the pay request. The Entity shall pay the Contractor for his/her performance under the contract within _ days of approval of the pay estimate. On contracts over 30 days in duration, the Entity shall pay the Contractor a pro-rata percentage of the contract amount on a monthly basis, based on the amount of work completed and approved in that month. The Entity will remunerate the Contractor within 30 days of the approved application for payment, after which interest will be added at a rate of _____on each payment. Retainer shall be released upon substantial

completion of the work. Funding for this contract is authorized pursuant to Public Law of the State of Illinois,

And _____.

(Local Statute or Ordinance)

ARTICLE 6
CHANGE ORDERS

If the scope of work is changed by the Entity, the change in price and contract time will be promptly negotiated by the parties, prior to commencement of work.

ARTICLE 7
CONTRACTOR'S OBLIGATIONS

The Contractor shall supervise and direct the Work, using skillful labor and proper equipment for all tasks.

Safety of the Contractor's personnel and equipment is the responsibility of the Contractor. Additionally, the Contractor shall pay for all materials, equipment, personnel, taxes, and fees necessary to perform under the terms of the contract.

Any unusual, concealed, or changed conditions are to be immediately reported to the Entity. The Contractor shall be responsible for the protection of existing utilities, sidewalks, roads, building, and other permanent fixtures. Any unnecessary damage will be repaired at the Contractor's expense.

ARTICLE 8
ENTITY'S OBLIGATIONS

The Entity's representative(s) shall furnish all information, documents, and utility locations, necessary for commencement of Work. Costs of construction permits and authority approvals will be borne by the Entity. A representative will be designated by the Entity for inspecting the work and answering on-site questions.

The Entity shall designate the public and private property areas where the disaster mitigation work is to be performed. Copies of complete "Right of Entry" forms, where they are required by the State and local law for private property, shall be furnished to the Contractor by the Entity. The Entity shall hold harmless and indemnify the Contractor judgments and awards alleged to have been caused by services rendered under this contract for disaster relief work unless such claims are caused by the gross negligence of the Contractor, his subcontractors or his employees.

ARTICLE 9
CLAIMS

If the Contractor wishes to make a claim for additional compensation, for work or materials is not clearly covered in the contract, or nor ordered by the Entity as a modification to the contract, he/she shall notify the Entity in writing. The Contractor and the Entity will negotiate the amount of adjustment promptly; however, if no agreement is reached, a binding settlement will be determined by a third party acceptable to both Entity and Contractor under the sections of applicable State law.

ARTICLE 10:

Insurance and Bonds

The contractor shall furnish proof of Worker's Compensation Coverage, Automobile Liability Coverage, and Comprehensive General Liability Insurance (Premises-Operations, Personal injury, etc. as deemed necessary by the Entity).

Surety: The Contractor shall deliver to the Entity fully executed Performance and Payment Bonds in the amount 100% of the contract amount, if required by the specifications, or general or special conditions of the contract. The Entity will reimburse the Contractor for the costs of the bonds, the cost of which will be included in the base bid.

ARTICLE 11

CONTRACTOR QUALIFICATIONS

The Contractor must be duly licensed in the State per statutory requirements.
THIS CONTRACT IS DULY SIGNED BY ALL PARTIES HERETO:

By_____
Seal

Contractor

Address _____

City & State _____

Entity - WILL COUNTY

By_____
Seal

Principal of the Firm

_____

NANCY SCHULTZ VOOTS

WILL COUNTY CLERK

_____

LAWRENCE M. WALSH

WILL COUNTY EXECUTIVE

Approved this ___ day of _____, 20____.

APPENDIX 9 – UNIT PRICE CONTRACT FOR DEBRIS REMOVAL

ARTICLE 1
AGREEMENT BETWEEN PARTIES

This contract is made and entered into on this the _____, 20____, by and between the county of _ _____, hereinafter called the ENTITY and _____, hereinafter called the CONTRACTOR.

ARTICLE 2
SCOPE OF WORK

This contract is issued pursuant to the Solicitation and Procurement on_____, 20 _____, for the removal of debris caused by the sudden natural or man-made-disaster of _____ _____ to _____, 20____. It is the intent of this contract to provide equipment and manpower to remove all hazards to life and property in the affected communities. Clean up, demolition, and removal will be limited to 1) that which is determined to be in the interest of public safety and 2) that which is considered essential to the economic recovery of the affected area.

ARTICLE 3
SCHEDULE OF WORK

Time is of the essence for this debris removal contract.

Notice to proceed with the Work: The work under this contract will commence on _____, 20_____. Maximum allowable time for the completion will be _____ Calendar days unless the Entity initiates additions or deletions by written charge order. Subsequent changes in cost and completion time will be equitably negotiated by both pursuant to applicable State law. Liquidated damages shall be assessed at $_____/calendar day for any days over the approved contract amount.

ARTICLE 4
CONTRACT PRICE

The unit prices for performing the work stipulated in the contract documents, which have been transposed from the low bidder's bid schedule are as follows:

Quantity	Unit of Measure	Description	Unit Cost	Total
Subtotal	_____			
Cost of Bond	_____			
Grand Total	_____			

*Debris shall be classified as one of the following units: cubic yards, each, square foot, linear foot, gallon, or an approved unit measure applicable to the specific material to be removed.

ARTICLE 5
PAYMENT

The Contractor shall submit certified pay request for completed work. The Entity shall have 10 calendar days to approve or disapprove the pay request. The Entity shall pay the Contractor for his performance under the contract within 20 days of approval of the pay estimate. On contracts over 30 days in duration, the Entity shall pay the Contractor a pro-rata percentage of the contract amount on a monthly basis based on the amount of work completed and approved in the month. The Entity will remunerate the Contractor within 30 days of the approved application for payment. After which interest will be added at a rate of _____ per annum. Payments shall be subject to a retainage of _____ _____ on each payment. Retainage shall be released upon substantial completion of the work.

Funding for this contract is authorized pursuant to Public Law of the State of Illinois, _____ _____, and _____ , local statute or ordinance.

ARTICLE 6
CLAIMS

If the Contractor wishes to make a claim for additional compensation, for work or materials not clearly covered in the contract, or not ordered by the Entity as a modification to the contract. He/she shall notify the Entity in writing. The Contractor and the Entity will negotiate the amount of adjustment promptly; however, if no agreement is reached a binding settlement will be determined by a third party acceptable so both Entity and Contractor under the auspices of applicable State law.

ARTICLE 7
CONTRACTORS OBLIGATIONS

The Contractor shall supervise and direct the Work, using skillful labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the Contractor. Additionally, the Contractor shall pay for all materials, equipment, personnel, taxes, and fees necessary to perform under the terms of the contract.

Any unusual, concealed, or changed conditions are to be immediately reported to the Entity. The Contractor shall be responsible for the protection of existing utilities, sidewalks, roads, buildings, and other permanent fixtures. Any unnecessary damage will be repaired at the Contractor's expense.

ARTICLE 8
ENTITY'S OBLIGATIONS

The Entity's representative(s) shall furnish all information, documents, and utility locations for necessary for commencement of Work. Costs of construction permits and authority approvals will be borne by the Entity. A representative will be designated by the Entity for inspecting the work and answering and on-site questions.

The Entity shall designate the public and private property areas where the disaster mitigation work is to be performed. Copies of "Right of Entry" forms, as required by State laws for private property,

shall be furnished to the Contractor by the Entity. The Entity shall hold harmless and indemnify the Contractor judgments and awards alleged to have been caused by services rendered under this contract for disaster relief work unless such claims are caused by the gross negligence of the Contractor, his/her subcontractors, or his/her employees.

The Entity will terminate this contract for failure to perform as specified, or for default by the Contractor.

ARTICLE 9
INSURANCE AND BONDS

The contractor shall furnish proof of Worker's Compensation Coverage, Automobile Liability Coverage, and Comprehensive General Liability Insurance (Premises-Operations, Personal Injury, etc…as deemed necessary by the Entity).

Surety: The contractor shall deliver to the Entity fully executed Performance and Payment Bonds in the amount of 100% of the contract amount, if required by the specifications, or general or special conditions of the contract. The Entity will reimburse the Contractor for the costs of the bonds, the cost of which will be included in the base bid.

ARTICLE 10
CONTRACTOR QUALIFICATIONS

The contractor must be fully licensed in the State of Illinois.

THIS CONTRACT IS DULY SIGNED BY ALL PARTIES HERETO:

by_____ Seal

Contractor

Address _____

City, State _____

Entity – WILL COUNTY

_____

NANCY SCHULTZ VOOTS

WILL COUNTY CLERK

_____

LAWRENCE M. WALSH

WILL COUNTY EXECUTIVE

Approved this ___ day of _____, 20____.

APPENDIX 10 – TEMPORARY DEBRIS STORAGE AND REDUCTION (TDSR) SITE CHECKLIST, ISSUES, AND LAYOUT

TEMPORARY DEBRIS STORAGE AND REDUCTION (TDSR) SITE CLOSEOUT CHECKLIST

The following is a recommended TDSR site closeout checklist.

□ Site Number and Location

□ Date closure complete

□ Household Hazardous Waste removed

□ Contractor equipment removed

□ Contractor petroleum and other toxic spills cleaned up

□ Ash piles removed

□ Compare baseline information of the temporary site conditions after the contractor vacates the site

TDSR CLOSEOUT ISSUES

Environmental Restoration Stockpiled debris will be a mix of woody vegetation, construction material, household items, and yard waste. Household hazardous waste and medical wastes should be segregated and removed prior to being stockpiled. Activities performed at the temporary debris storage and reduction site will include stockpiling, sorting, recycling, incineration, grinding, and chipping. Incineration operations will occur in air curtain pits and only woody debris will be incinerated. Due to operations occurring contamination from petroleum spills or runoff from incineration and debris piles may occur. Therefore close monitoring of the environmental conditions is a coordinated effort.

Site Remediation During the debris removal process and after the material is removed from the debris site; environmental monitoring will need to be conducted. This is to ensure no long-term environmental effects occur. Environmental monitoring is needed for the following areas:

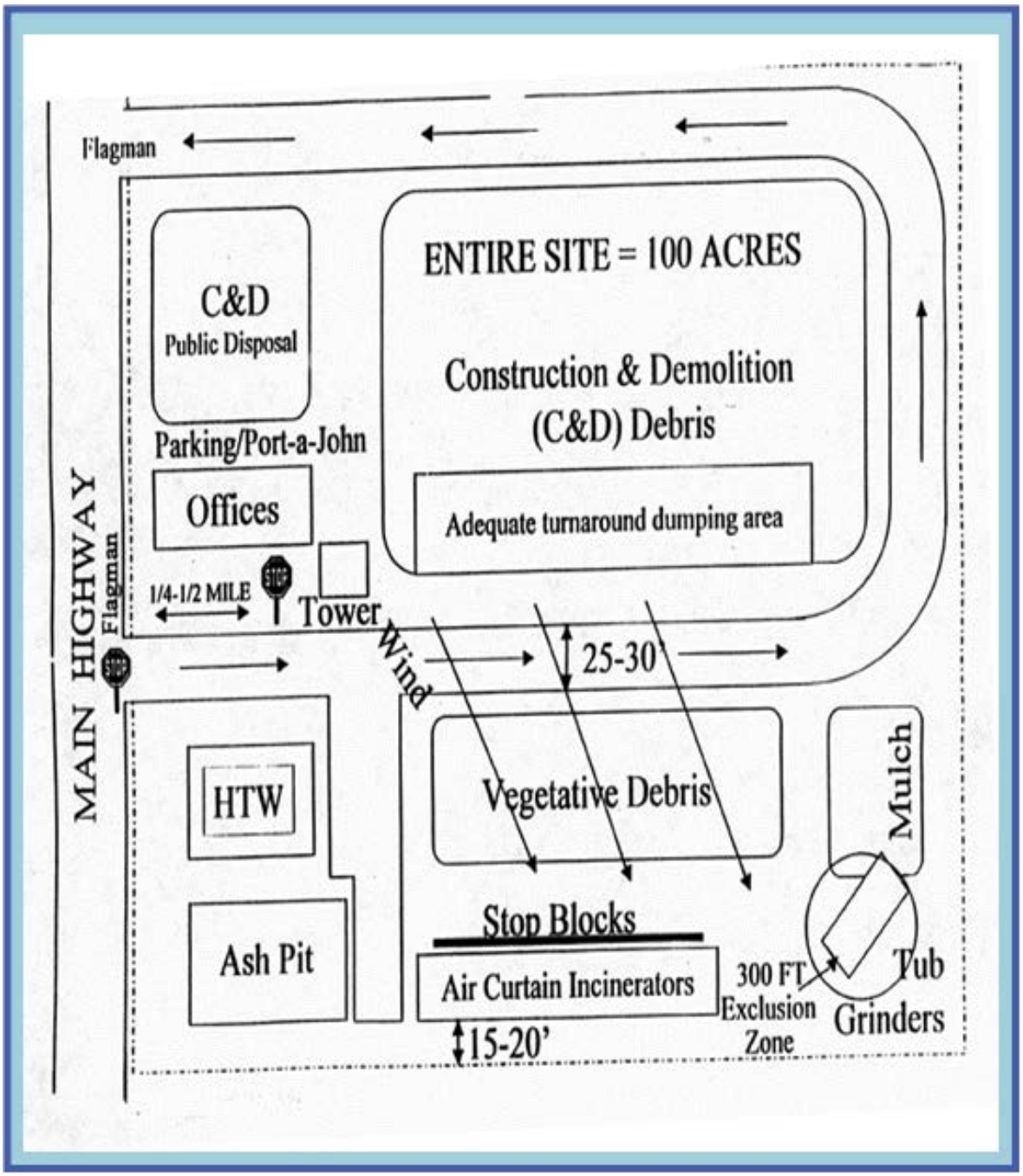
Ash- Monitoring consists of chemical testing to determine suitability of material for landfill placement.

Soils- Monitoring consists of using portable meters to determine if soils are contaminated by volatile hydrocarbons. Contractors do monitoring if there has been a determination that chemicals such as oil or diesel has spilled on site.

Groundwater- Monitoring is done on selected sites to determine effects of rainfall leaching (leaking) through ash areas or stockpile areas.

SAMPLE TDSR LAYOUT

The following is a sample layout for a Temporary Debris Storage & Reduction Site



APPENDIX 11 – TEMPORARY CONSTRUCTION AND DEMOLITION STAGING/TRANSFER SITE GUIDELINES

GENERAL

The following guidelines should be considered when establishing staging/transfer sites for Construction & Demolition (C&D) and (C&D) recycling treatment and processing facilities.

These guidelines apply only to sites for staging/transferring C&D storm debris (roof shingles/roofing materials, carpet, insulation, wallboard, treated and painted lumber, etc.) Arrangements should be made to screen out unsuitable materials, such as household garbage, white goods, asbestos containing material (ACM's), and household hazardous waste.

SELECTING TEMPORARY STAGING/TRANSFERRING SITES

Locating sites for staging/transferring C&D waste can be accomplished by evaluating potential sites and be revisiting sites used in the past to see if the site conditions have changed or if the surrounding areas have changed significantly to alter the use of the site. The following guidelines are presented in locating a site for "staging/transferring" and are considered "minimal standards" for selecting a site for use:

Sites should be located outside of identifiable or known floodplain and flood prone areas; consult the Flood Insurance Rate Map for the location in your City to verify these areas. Due to heavy rain associated with thunderstorms and saturated conditions that result, flooding may occur more frequently than normally expected.

Unloading areas for incoming C&D debris material should be at a minimum 100 feet from all surface waters of the state. "Waters of the state" includes but is not limited to small creeks, streams, watercourses, ditches that maintain seasonal groundwater levels, ponds, wetlands, etc.

Storage areas for incoming C&D debris be at least 100 feet from the site property boundaries, on-site buildings, structures, and septic tanks with leach fields or at least 250 feet from off-site residential dwellings, commercial or public structures, and potable water supply wells, whichever is greater.

Materials separated from incoming C&D debris (white goods, scrap metal, etc.) shall be at least 50 feet from site property lines. Other non-transferable C&D wastes (household garbage, larger containers of liquid, household hazardous waste shall be placed in containers and transported to the appropriate facilities as soon as possible.

Sites that have identified wetlands should be avoided, is possible. If wetlands exist or wetlands features appear at a potential site, verification by the Army Corps of Engineers or Department of Natural Resources will be necessary to delineate areas of concern. Once areas are delineated, the areas shall be flagged and a 100-foot buffer shall be maintained for all activities on-going at the site.

Sites bisected by overhead power transmission lines need careful considerations due to large dump body trucks/trailers used to haul debris, and underground utilities need to be identified due to the potential for site disturbances by truck/equipment traffic and possible site grading.

Sites shall have an attendant(s) during operating hours to minimize the acceptance of unapproved materials and to provide direction to haulers and private citizens brining in debris.

Sites should be secure after operating hours to prevent unauthorized access to the site. Temporary measures to limit access to the site could be the use of trucks or equipment to block entry. Gates, cables, or swing pipes should be installed as soon as possible for permanent access control, if a site is to be used longer than two weeks.

When possible, signs should be installed to inform haulers and the general public on types of waste accepted, hours of operation, and who to contact in case of afterhours emergency.

Final written approval is required to consider any TSDR site to be closed. Closeout of processing/recycling sites shall be within one (1) year of receiving waste. If site operations will be necessary beyond this time frame, permitting of the site by the State may be required. If conditions at the site become injurious to public health and the environment, then the site shall be closed until conditions are corrected or permanently closed. Closeout of sites shall be in accordance with the closeout and restoration of TDSR sites guidelines.

C&D TREATMENT & PROCESSING/RECYCLING SITES

Management of C&D debris and source separated materials to be recycled shall be in accordance with the following additional conditions:

Contact IEPA for information on managing asbestos containing materials (ACM's) or materials that are considered regulated asbestos containing materials.

Sites should be located outside of identifiable or known floodplain and flood prone areas; consult the Flood insurance Rate Map for the locations in your City to verify these areas. Due to heavy rains associated with thunderstorms and saturated conditions that result, flooding may occur more frequently than normally expected.

Storage areas for incoming debris should be at a minimum 100 feet from all surface waters of the state. "Waters of the state" includes but is not limited to small creeks, streams, watercourses, ditches than maintain seasonal groundwater levels, ponds, wetlands, etc.

Storage areas for incoming debris shall be located at least 100 feet from property boundaries and on-site building/structures.

Sites that that have identified wetlands should be avoided, if possible. If wetlands exist or wetland features appear at a potential site, verification by the Army Corps of Engineers or Department of Natural Resources will be necessary to delineate area of concern. Once areas are delineated, the area shall be flagged and a 100-foot buffer shall be maintained for all activities on-going at the site.

Storage area for incoming C&D debris shall be at least 100 feet from the site property boundaries, on-site buildings, structures, and septic tanks with leach fields or at least 250 feet from off-site residential dwellings, commercial or public structures, and potable water supply wells, whichever is greater.

Sites bisected by overhead power transmission lines need careful consideration due to large sump body trucks/trailers used to haul debris and the intense heat generated by eh air curtain burner (ACB) devices. Underground utilities need to be identified prior to digging pits for using that ACB device.

Provisions should be made to prevent unauthorized access to facilities when not open for use. As a temporary measure, access can be secured by blocking drives or entrances with trucks to other equipment when facilities are closed. Gates, cables, or other more standard types of access control should be installed as soon as possible.

When possible, post signs with operating hours and information about what types of clean up waste may be accepted. Also include information as to whether only commercial haulers or the general public may deposit waste.

Final written approval is required to consider any TDSR site to be closed. Closeout of processing/recycling sites shall be within six months of receiving waste. If site operations will be necessary beyond this time frame, permitting of the site by the State may be required. If conditions at the site become injurious to public health and the environment, then the site shall be closed until conditions are corrected or permanently closed.

APPENDIX 12 – CHIPPING AND GRINDING SITE LOCATIONS AND OPERATIONS

Locating sites for chipping/grinding of vegetative and land clearing debris will require a detailed evaluation of potential sites and possible revisits at future dates to see if site conditions have changed or if the surrounding areas have changed significantly to alter the use of this site.

The following guidelines are presented in locating a site for "chipping/grinding" and are considered "minimum standards" for selecting a site for use.

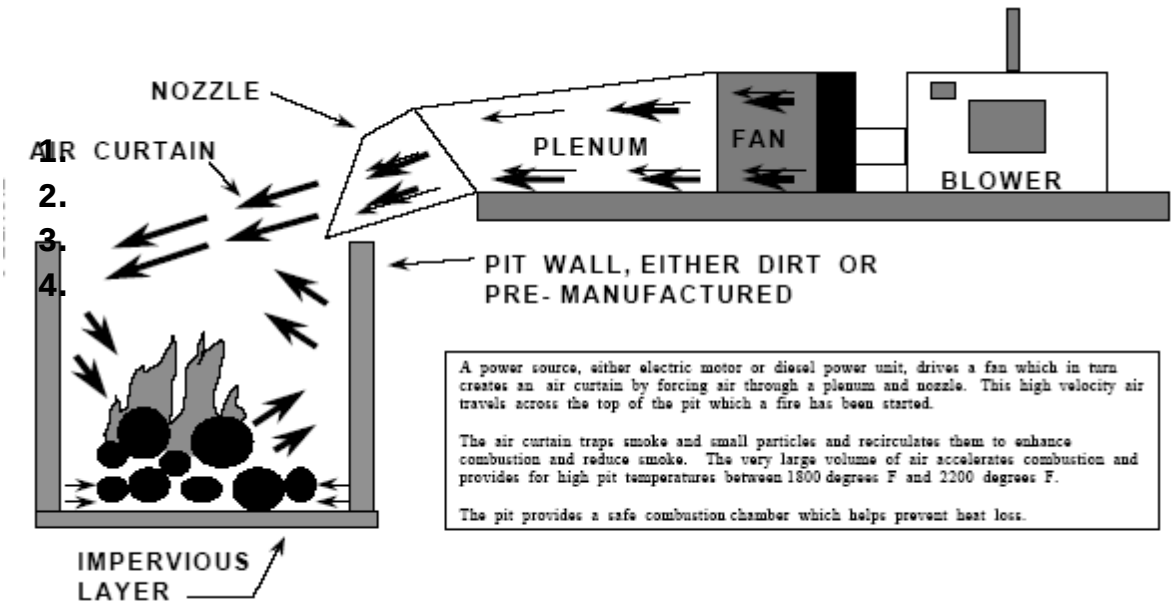
- Sites should be located outside of identifiable or known floodplain and flood prone areas; consult the Flood Insurance rate Map for those locations. Due to heavy rains associated with thunderstorms and saturated conditions that result, flooding may occur more frequently than normally expected.
- Storage areas for incoming debris and processed material should be at a minimum 100 feet from all surface waters of the state. "Waters of the state" includes but is not limited to small creeks, streams, watercourses, ditches that maintain seasonal groundwater levels, ponds, wetlands, etc.
- Storage areas for incoming debris and processed material shall be at least 100 feet from the site property boundaries and on-site buildings/structures. Management of processed material shall be in accordance with the guidelines for reducing the potential for spontaneous combustion in compost/mulch piles.
- Storage area for incoming debris shall be located at least 100 feet from residential dwellings, commercial or public structures, potable water supply wells, and septic tanks with leach fields.
- Sites that have identified wetlands should be avoided, if possible. If wetlands exist or wetland features appear at a potential site, verification by the Army Corps of Engineers or Department of Natural Resources will be necessary to delineate areas of concern. Once areas are delineated, the areas shall be flagged and a 100-foot buffer shall be maintained for all activities on-going at the site.
- Sites bisected by overhead power transmission lines need careful consideration due to large dump body trucks/trailers used to haul debris, and underground utilities need to be identified due to the potential for site disturbance by truck/equipment traffic and possible site grading.
- Sites shall have an attendant(s) during operating hours to minimize the acceptance of unapproved materials and to provide directions to haulers and private citizens bringing in debris.
- Sites should be secure after operating hours to prevent unauthorized access to the site. Temporary measures to limit access to the site could be the use of trucks or equipment to block entry. Gates, cables, or swing pipes should be installed as soon as possible for permanent access control, if a site is to be used longer than two weeks. Sites should have adequate access that prohibits traffic from backing onto public right-of-way or blocking primary and/or secondary roads to the site.
- When possible, signs should be installed to inform haulers and the general public on types of waste accepted, hours of operation, and who to contact in case of an afterhours emergency.
- Grinding of clean wood waste such as pallets and segregated non-painted/non-treated dimensional lumber will be allowed.
- Final written approval is required to consider any TDSR site to be closed. Closeout of staging and processing sites shall be within six months of receiving waste. If site operations will be necessary beyond this time frame, permitting of the site may be required. If conditions at the site become injurious to public health and the environment, then the site shall be closed until conditions are

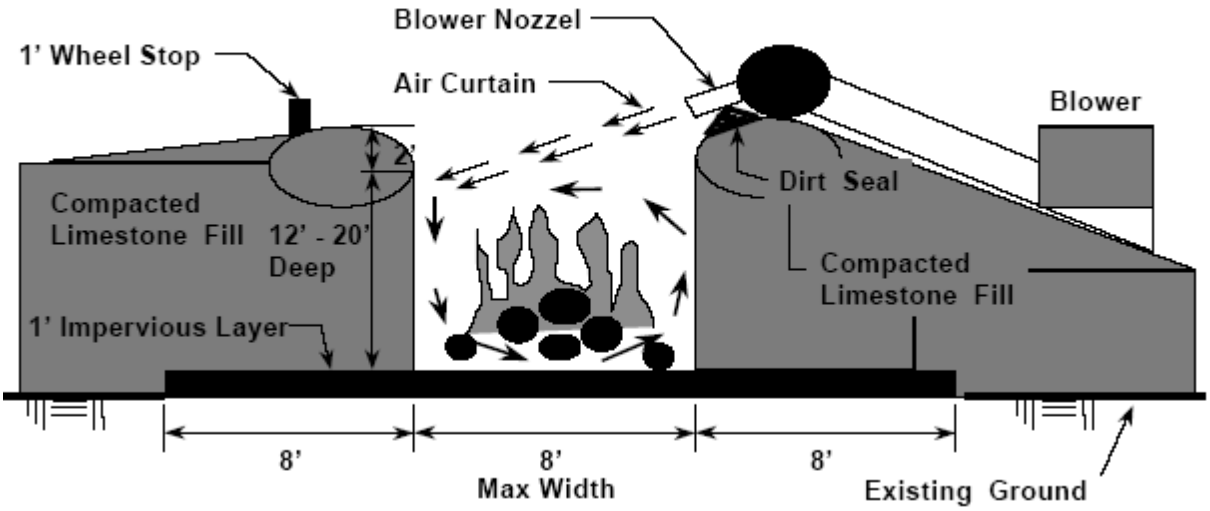
corrected or permanently closed. Closeout of sites shall be in accordance with the closeout and restoration for TDSR sites.

APPENDIX 13 – BURN SITE LOCATION AND OPERATIONS

- Locating sites for vegetative debris combustion operations is the responsibility of the Debris Manager. The following guidelines are presented for selecting a burn site and operational requirements once a site is in use:
- Contact the local fire department for input into site selection in order to minimize the potential for fire hazards, other potential problems related to firefighting that could be presented by the locations of the site, and to ensure that adequate fire protection resources are available in the event of an emergency.
- Contact IEPA for any requirements regarding site restrictions and air quality permits.
- Sites should be located outside of identifiable or known floodplain and flood prone area; consult the Flood Insurance Rate Map for those locations. Due to heavy rains associated with thunderstorms and saturated conditions that result, flooding may occur more frequently than normally expected. If air curtain burner pits are utilized, a minimum two-foot separation to the seasonal high water table is recommended. A larger buffer to the seasonal high water table may be necessary due to on-site soil conditions and topography.
- Storage areas for incoming debris should be at a minimum 100 feet from all surface waters of the state. “Waters of the state” includes but is not limited to small creeks, streams, watercourses, ditches that maintain seasonal groundwater levels, ponds, wetlands, etc.
- Storage areas for incoming debris shall be located at least 50 feet from property boundaries and 100 feet from building/structures.
- Air Curtain Burners in use should be located at least 30 feet from on-site storage areas for incoming debris and 200 feet from on-site dwellings and other structures, potable water supply wells, and septic tanks and leaching fields.
- Wood ash stored on-site shall be located at least 30 feet from storage areas for incoming debris, processed mulch or tub grinders (if a grinding site and ACB site is located on the same property). Wood ash may be wetted prior to removal from the ACB device or earth pit and placed in storage. If the wood ash is to be stored prior to removal from the site, then rewetting may be necessary to minimize airborne emissions.
- Wood ash to be land applied on-site or off-site shall be managed in accordance with the guidelines for the land application of wood ash from storm debris burn sites.
- Sites that have identified wetlands should be avoided, if possible. If wetlands exist or wetland features appear at a potential site, verification by the Army Corps of Engineers or Department of natural Resources will be necessary to delineate areas of concern. Once areas are delineated, the area shall be flagged, and a 100-foot buffer shall be maintained for all activities on-going at the site.
- Sites bisected by overhead power transmission lines need careful consideration due to large body trucks/trailers used to haul debris and the intense heat generated by the ACB device. Underground utilities need to be identified prior to digging pits for using the ACB device.
- Provisions should be made to prevent unauthorized access to facilities when not open for use. As a temporary measure, access can be secured by blocking drives or entrances with trucks or other equipment when the facilities are closed. Gates, cables, or other more standard types of access control should be installed as soon as possible.

- When possible, post signs with operating hours and information about what types of clean up waste may be accepted. Also, included information as to whether only commercial haulers or the general public may deposit waste.
- Closeout of air curtain burner site shall be within six months of the last waste receiving date. If conditions at the site become potentially injurious to public health and the environment, then site conditions shall be evaluated and modified accordingly.





APPENDIX 14 – GUIDELINES FOR LAND APPLICATION OF WOOD ASH FROM BURN SITES

- If the amount of ash is significant and/or the land area for application is not sizeable, then disposal of ash at the permitted municipal solid waste landfill should strongly be considered. Spreading large quantiles of ash on a small site will result in improper application rate. Ash in pits or piles should be spread some and allowed to cool prior to transport to a landfill.
- Incomplete combustion of woody debris will result in unburned or partially burned pieces of wood. These pieces can be quite sizeable of combustion conditions were not optional. These pieces of wood may need to be removed from the ash by human hands or through mechanical means prior to or during the land application process.
- Whenever possible, soil test data and waste analysis of the ash should be limited to 2 to 4 tons per acre/one-time event. If additional applications are necessary, due to the volume of ash generated and time from in which the ash is generated, then an ash management plan will be needed.
- Ash should be land applied in a similar manner as agricultural limestone.
- Ash should not be land applied during periods of high wind to avoid the ash blowing off the application sites.
- Ash should not be land applied within 25 feet of surface waters or within 5 feet of drainage ways or ditches on sites that are stabilized with vegetation. These distances should be doubled on sites that are not vegetated.
- Records should be maintained to indicate where ash is applied and the approximate quantities of ash applied.
- Assistance in obtaining soil test data and waste analysis of ash may be available through local or State agencies or private labs.

APPENDIX 15 – GUIDELINES FOR REDUCING THE POTENTIAL FOR SPONTANEOUS COMBUSTION IN COMPOST OR MULCH PILES

- When ground organic debris is put into piles, microorganisms can very quickly begin to decompose the organic material. The microorganisms generate heat and volatile gases as a result of the decompressions process. Temperatures in these piles can easily rise to more than 160 degrees Fahrenheit. Spontaneous combustion can occur in these situations.
- Spontaneous combustion is more likely to occur in larger piles of debris because of a greater possibility of volatile gases building up in the poles and being ignited by the high temperatures. If wind rows can be maintained 5 feet to 6 feet high and 8 feet to 10 feet wide, volatile gases have a better chance of escaping the piles; and the possibility of spontaneous combustion will be reduced.
- Turning piles when temperatures reach 160°F can also reduce the potential for spontaneous combustion. Pile turning provides an opportunity for gases to escape and for the contents for the pile to cool. Adding moisture during turning will increase cooling. Controlling the amount of nitrogen-bearing (green) wastes in piles will also help to reduce the risk of fire. The less nitrogen in the piles the slower the decomposition process and consequently the less heat generated and gases released.
- Large piles should be kept away from wooded areas and structure and should be accessible to firefighting equipment, if a fire were to occur. Efforts should be made to avoid driving or operating heavy equipment on large piles because the compaction will increase the amount of heat build-up, which could increase the possibility of spontaneous combustion.

APPENDIX 16 – WILL COUNTY LANDFILLS, GARBAGE COLLECTION SERVICES & OTHER MISCELLANEOUS DEBRIS SITES

Prairie View Landfill
29755 S. Prairieview
Wilmington, IL 60481
815-424-0052

LARAWAY DISPOSAL FACILITY – WM
21233 W. Laraway Rd.
Joliet, IL 60436
815-727-6148

WASTE MANAGEMENT – ROCKDALE
2100 Moen Ave.
Rockdale, IL 60436

BIG BOX DISPOSAL
Lockport, IL 60441
815-838-2800

ENVIRON TECH
1800 Ashley Rd.
Morris, IL 60450
815-942-1800

REPUBLIC SERVICES
808 S. Joliet St.
Joliet, IL 60436
815-723-3200

CHRISTIANSEN Compost
12151 W. Wilmington Rd.
Peotone, IL 60468
708-258-6123

WM Willow Ranch Compost
1371 N. Joliet Rd.
Romeoville, IL 60446
630-739-0398

EF Heil C&D Recycling
12152 Naperville/Plainfield Rd.
Plainfield, IL
815-436-3500

Lockport Recycling & Scrap
14167 New Ave.
Lockport, IL 60441
815-838-9796

Joliet Recycling
2851 Mound Rd.
Joliet, IL
815-730-0700

WASTE MANAGEMENT
2850 W. Mound Rd.
Joliet, IL 60436
815-729-4105

APPENDIX 17 – CATASTROPHIC ANIMAL MORTALITY DISPOSAL GUIDELINES

SCOPE AND APPLICATION

In the event of a foreign animal disease (FAD) outbreak or other natural or man-made disaster, Will County livestock and poultry producers could be faced with the task of large-scale mortality disposal and the disposal of other potentially contaminated materials associated with the FAD response and mitigation. The County, providing emergency response in these events, would likely be called on to support livestock and poultry producers who, for whatever reason, are not prepared to dispose of animals or associated materials on their property. The County may also need to address the disposal of depopulated animals, which were temporarily held and cared for by the County during a livestock movement restriction. See Illinois Department of Agriculture's Emergency Animal Disease Response Plan (2001).

Currently, it is suggested that all livestock or poultry operations prepare a catastrophic mortality disposal plan. This plan should consider on-site disposal as the primary option. However, offsite disposal may be necessary in situations where producers cannot dispose of animals on their property for various reasons, so other available disposal options should be listed. All catastrophic disposal planning should follow the plans and considerations outlined in this section, the Illinois Dead Animal Disposal Act (225 ILCS 610 et seq.), and the National Animal Health Emergency Management System (NAHEMS) Disposal Guidance (NAHEMS, 2005). A plan outline for individual operations is provided in Section V, Attachment 1.

This section will provide functional guidance about providing and assisting in catastrophic mortality disposal associated with a FAD outbreak; however, the plans and considerations are applicable to any catastrophic mortality event. In addition, this section addresses the disposal of other materials associated with the response and containment of a FAD. This standard operating guideline contains information from and is consistent with NAHEMS guidelines, as of October 2008.

When implementing any portion of this section during a FAD response, Will County will consider existing regulations and environmental concerns associated with the materials being disposed and the disposal methods selected. In some cases, existing regulations and guidance may be altered to accommodate the emergency nature of the response and the urgent need to isolate potentially infected materials through disposal. Both the Illinois Dept. of Agriculture (IDOA) and IEPA should be consulted prior to field implementation of any disposal to verify that the methods do not violate regulations. Non-emergency animal disposal rules can be found in Title 8, Illinois Admin. Code, Part 90, Illinois Dead Animal Disposal Act.

SUMMARY OF PROCEDURES

This document presents the operational considerations and details associated with Will County's response to a FAD outbreak or other catastrophic animal mortality event. The response and containment efforts will likely generate large numbers of livestock or poultry mortalities and also associated materials that will require isolation through disposal or destruction. The operational considerations include identifying methods of disposal and county-managed locations for disposal; suggesting critical personnel and equipment for response; cleaning and disinfection; protecting health and safety; and also determining methods of communication and documentation, providing public information, and mental health support.

A. IDENTIFYING METHODS FOR MORTALITY DISPOSAL

Burial is identified as the preferred disposal method; however, ultimate use of this method will depend on local environmental considerations (i.e., depth to groundwater and soil texture) and the specific disease involved. To help with disposal planning, a "Disposal Option Checklists" can be found in Attachment 2.

As disposal options are considered, the total scope of an emergency response to a catastrophic livestock or poultry mortality event should be considered. For example, the selection of air-curtain burning as a disposal option could severely impact County resources relative to other response areas, such as traffic control or cleaning and disinfection, being delegated to local firefighters who also would be assigned to the incineration effort. Using these resources to implement and oversee carcass incineration may redirect limited county resources from other critical response activities, and divert them from their primary role of protecting the community from fire.

Both NAHEMS and the National Agricultural Biosecurity Center (NABC) have published reference documents providing detailed explanations of the most common catastrophic mortality disposal options. NAHEMS 2005, Disposal, was designed to provide guidance in planning. The 2004 NABC document, "Carcass Disposal: a Comprehensive Review," goes beyond guidance for planning, providing a thoroughly detailed examination of mortality disposal methods, and providing operational detail. The most probable mortality disposal methods Will County is likely to implement are: burial, landfilling, air-curtain burning, composting and rendering. A short synopsis of the advantages and disadvantages of each method is provided below. This synopsis is not all-inclusive; rather, it provides an overview and is adapted from both NAHEMS 2005 and NABC 2004.

i. Burial

The most significant advantage of a mass burial site is the capacity to dispose of a tremendous number (volume) of carcasses in a short amount of time. Generally, burial is considered to be an economical option for catastrophic mortality disposal. There are several factors that could impact the cost effectiveness of burial, such as whether equipment is owned or rented and whether any environmental protection measures must be employed in conjunction with burial.

The relative ease and economic aspect of burial is tied to the fact that, even in rural settings, the needed equipment is widely available and the method does not require sophisticated training or planning. These aspects combine to allow this method of disposal to be implemented very quickly. If performed on-farm or onsite, burial eliminates the need for transportation of potentially infectious material, which in turn reduces the potential for disease spread or breaches in biosecurity. Burial is more discrete than other methods (e.g., open burning), especially when performed on-site (on-farm) and may therefore be less likely to attract significant attention from the public. These attributes, particularly those of convenience, logistical simplicity, and rapid completion, make burial an ideal method of carcass disposal; where environmental impact is unlikely and where sufficient soil depth exists.

The greatest potential disadvantage associated with this method is its potential to impact the environment, in particular groundwater. This potential disadvantage is related to the

site setting (i.e., depth to groundwater, soil type, groundwater usage, etc.) and the quantity of material buried. Catastrophic mortality burial may also require deed restrictions for the location of the burial site, adding a long-term liability component to the activity. In some instances, the disease in question may preclude burial as an option (i.e., bovine spongiform encephalopathy or anthrax). If burial involves transporting carcasses off-site; cost; vector control; and making containers leak-proof, or using containment bags can create additional disadvantages.

Burial isolates carcasses while they decompose; however, it may not always represent a consistent means of eliminating disease agents. Unless pH changes within a carcass destroy a disease agent, the slow decomposition of the organic material may allow the disease agent to stay viable within the carcass for years. This concern is tied to the common observation that materials within burial sites may persist for years or even decades. Ultimately, burial must be considered a long-term process. From a practical standpoint, the use of burial may be limited by several factors, including a lack of sites with suitable geological and/or hydrological properties in some regions, and regulatory constraints or exclusions relative to suitable locations. In some cases, the presence of an animal carcass burial site may negatively impact land value or options for future use. In spite of these potential disadvantages, burial sites have the potential to serve as an effective means of carcass disposal in an emergency situation. However, this would require thorough site assessment, planning, and design well in advance of the need.

ii. Landfilling

If a sanitary landfill is reasonably close to a local jurisdiction, and the operator is allowed to and agrees to accept catastrophic mortality carcasses, that landfill may provide a viable option for catastrophic mortality disposal. Perhaps the most significant advantages of landfill disposal are the fact that the infrastructure for disposing of waste already exists, it may be able to accept carcasses and other response-related debris and waste, the disposal capacity can be relatively large and the facility is engineered to isolate its contents from the environment. In addition, landfill sites generally employ best management practices and have engineered structures to provide environmental protection. During an emergency, time is often very limited, and therefore landfills offer the advantage of pre-existing and immediately-available infrastructures for waste disposal (including equipment, personnel, procedures and, importantly, containment systems).

Even though disposal by landfill may be an allowed option, permitted landfills are available in Will County and other nearby counties, landfill operators may not be willing to accept animal carcasses. Additionally, because the development of a landfill site is an extremely lengthy, difficult, and expensive process, landfill owners and planning authorities may not want to sacrifice domestic waste capacity to accommodate carcass material. Those landfill sites that do accept animal carcasses may not be open for access when needed or when convenient. Like burial, landfilling of carcasses represents a means of containment rather than of elimination, and long-term management of the waste is required. However, this long-term commitment will be in effect for landfill sites regardless of whether carcass material is accepted. An additional possible disadvantage associated with landfill disposal is that it will involve transporting carcasses offsite which

adds concerns about hauling and disposal costs, and making containers leak-proof or using containment bags to control spillage and vectors. It should be noted that this potential for disease spread would be equally associated with other off-site disposal methods.

iii. Air-Curtain Burning

Air-curtain burning (ACB) is the preferred option to open burning. The engineered nature of this method creates higher combustion temperatures and results in a cleaner burn. Proper air curtain burning occurs at temperatures that will destroy all known pathogens. In addition, ACB will greatly reduce the volume of waste material, converting carcasses and debris to ash. The equipment for ACB is mobile, requires minimal training to operate, and can also be used for burning vegetative debris.

ACB can be expensive relative to other disposal methods due to the equipment and fuel costs. The burner requires a continuous fuel source, usually diesel. The operation and maintenance of the equipment and the burn itself will probably require the services of a Contractor. In addition, carcasses are generally composed of 70 percent water, creating the need for considerable amounts of fuel and dry burning materials. The use of moist wood or debris with lower combustibility will result in a poor air/fuel mixture and produce noxious smoke and incomplete combustion.

iv. Composting

Composting is a common method employed by producers to dispose of daily mortalities, especially poultry and young livestock. The composting process can effectively eliminate carcasses and the disease agents they may carry. The composting of diseased animal carcasses on affected premises is a suitable alternative method of disposal if an appropriate site and the proper supplies (e.g., wood chips, sawdust and biosolids) are available. Most pathogens are rapidly deactivated by temperatures reached early in the composting process. While the primary objective of composting diseased animal carcasses is deactivation of disease organisms, other advantages of composting are the minimal effect on the environment and production of a useful end product. However, composting of animal casualties would likely need to be performed on-farm, as the only composting facilities in the area are prohibited from accepting any materials other than landscape waste.

Although composting appears to be simple, it is an exceedingly complex process that requires good management to be successful. Composting requires a source of carbon, such as straw or wood chips, and a bulking agent, to increase porosity and oxygen flow. Maintaining the optimal carbon to nitrogen (C:N) ratio can be challenging, as is maintaining the proper moisture and oxygen levels. Imbalances in any of these factors can slow the composting process and reduce the composting temperatures, not allowing for proper sterilization. Even with proper management complete composting of carcasses may require 30+ days, or more.

Composting large animals will require the body cavities to be punctured or the carcasses to be cut into smaller pieces. Both of these actions would raise the potential for the

release and spread of contaminated body fluids. Maintenance of the moisture and oxygen levels will require periodic compost pile mixing or turning. This can be a labor intensive endeavor and it could result in the release of disease causing agents. A compost area must be managed to eliminate scavenger access to carcasses. If scavengers get access to diseased carcasses they could spread a disease agent. Finally, composted materials will still need to be tested for the presence of disease agents prior to their removal and use. Like burial, composting may not be an acceptable disposal method for some disease agents (i.e., anthrax, bovine spongiform encephalopathy, etc.).

V. Rendering

Rendering is an economical method of disposing of carcasses. It is questionable if a renderer could absorb the additional biomass associated with a catastrophic mortality event. If this is an option being considered by a local jurisdiction, contact should be made with the rendering company to assess the ability to absorb the carcasses associated with a catastrophic event. Below is a list of available renderers in the Greater Chicago area. The movement of carcasses to the rendering plant poses the additional risk of spreading a disease agent.

REGIONAL RENDERING COMPANIES

American Biofuels Corporation
1929 Cherry Hill Road
Joliet, IL 60433

Kaluzny Brothers, Inc.
2324 Mound Road
Joliet, IL 60436

Waste Management
2100 Moen Ave
Rockdale, IL 60436

Charles Environmental
44W861 Main Street Road
Elburn, IL 60119

Liquid Environmental Solutions of Illinois
12123 South Stony Island Avenue
Chicago, IL 60633

Mendota Agri-products, Inc.
448 North 3973 Road
Mendota, IL 61342

Chicago Biofuels, LLC
4800 S. Richmond Street
Chicago, IL 60632

Graver Livestock Removal
P.O. Box 851
Yorkville, IL 60560

Green Grease Environmental
8916 S. Octavia
Bridgeview, IL 60455

Jackmarx LLC
165 W. Hintz Rd.
Wheeling, IL 90090

Solvent Systems International, Inc.
70 King Street
Elk Grove Village, 60007

Torvac, Division of Darling International
3000 West Wireton Road
Blue Island, IL 60406

B. IDENTIFYING LOCATIONS FOR MORTALITY DISPOSAL

Once the method(s) of disposal is determined, counties should identify locations where the disposal will occur. Often the selection of disposal methods and locations will occur concurrently.

In some cases, due to limited possibilities for locating disposal sites, a county may identify these areas before identifying the disposal method(s). In these cases, the disposal method would be tailored to the possible disposal sites. If private lands are considered for mortality disposal, the county should obtain written use agreements from the landowners.

At sites where on-site disposal is not possible or practical, disposal of euthanized animals will be carried out at another location. This will require the movement of carcasses offsite for disposal. Cases that could necessitate off-site disposal include, but are not limited to: disposal of animals involved in laboratory research, conditions where there is not adequate land area, sites with shallow water tables, and sites in close proximity to large human populations. If locations requiring emergency mortality disposal are adjacent to each other, consideration should be given to a shared or common disposal area.

The following list presents considerations for selecting an emergency mortality disposal site:

- Public health or environmental protection laws, including fire codes and other regulations. Local authorities must be consulted as to the need for permits as well as for general advice and recommendations.
- Number and type of animals that could be disposed of at the site.
- The amount and type of non-animal material that will need to be disposed.
- Any potential hazard the material may pose to humans or animals.
- Potential disposal areas should be located within the borders of a quarantine area, in the event of a FAD outbreak.
- The proximity of private lands and human or animal housing areas to potential disposal sites should be considered.
- Isolation from public areas is desirable.
- Areas should allow protection from scavenging animals.
- These areas should not be located in sensitive environments (i.e., wetlands, highly erodible land, etc.).
- If combustion is selected, sites should be isolated from public view.
- The distance between the proposed disposal site and local ground water or surface water. The potential ground water and surface water impact must be considered.
- Average weather conditions, including prevailing wind direction, especially in the event that incineration is considered.
- Availability of the type of supplies and equipment necessary for the disposal method selected (e.g., fuel for burners, carbon sources for composting, or citric acid for the treatment of milk and dairy products and dairy wastewater prior to disposal, etc.).
- The permeability of the subsoil, amount or rocks in the soil and drainage characteristics of the site.
- Availability of utilities, such as electric (overhead lines), water, sewer, telephone, etc.
- The location of underground or overhead utilities (e.g., septic tanks and equipment for water, gas, electricity, telephone and sewage).
- Roads or open areas that can provide large trucks and other vehicles with access to the disposal site.
- If access control is difficult, it may be desirable to post guards at some disposal areas.
- Subsequent use of the disposal area.

Will County emergency planners will work with IDOA and IEPA to review and recommend potential catastrophic animal mortality disposal methods and locations.

C. MORTALITY DISPOSAL

The following information identifies the personnel, equipment and other supporting services that may be necessary to properly dispose of animal mortalities in an emergency situation.

i. Personnel

Two types of personnel are needed to implement a mortality disposal action. Specially trained workers will be needed to operate the heavy machinery and general laborers will be needed to support the heavy machinery operators. Some members of a mortality disposal crew will require training in equipment and personal cleaning and disinfection.

Possible organizations that could be used for support include: private contractors (heavy machinery operators), Fire Departments, County Highway Department, municipal public works departments, Illinois Department of Transportation (IDOT), Illinois National Guard, and the Illinois Department of Natural Resources. Volunteer organizations could also be used, as appropriate. If volunteer groups are utilized, the State's Attorney should evaluate the volunteers' liability relative to assisting the County with the response to a livestock or poultry emergency. Every effort should be made to limit or remove associated liabilities for volunteers.

Personnel will be assigned to mortality disposal sites for shifts with lengths determined by the Planning and Operations Sections. In most cases, these workers will need to be provided food, water and sanitary facilities.

ii. Equipment

The following list of equipment could be used for mortality disposal:

Heavy machinery:

- Excavators and backhoes
- Bulldozers
- Front-end loaders
- Forklifts
- Tractors/trailers
- Dump trucks
- Fire truck (burning operations)
- Roll-off trucks
- Cranes
- Chains, hooks, shovels and cargo nets

Lighting: Lighting should provide general area illumination for personnel. With any lighting system, it will be necessary to provide electricity, either with batteries, generators or drop service from power lines. The use of a drop service will require coordination with the local power company.

Communications: Each mortality disposal team leader should be provided a means of communication with the EOC. The type of communication may be dependent upon the local topography, as radio and cell phone reception are impacted by the physical location and characteristics.

Biosecurity: Portable showers, sprayers, boot washes, personnel protective equipment (PPE) such as disposable coveralls and other associated biosecurity aids should be provided to each mortality disposal team. Since team members will be working in the most contaminated environments, they should implement some level of cleaning and disinfection of personnel and equipment even between disposal sites, but especially when leaving one site and exiting the quarantine area.

Personnel Protective Equipment (PPE): water, hard hat, safety glasses or face shield, rubber boots, rain suit (jacket and coveralls), cotton overalls or disposable coveralls, disposable synthetic impermeable under gloves (nitrile, latex, etc.), disposable synthetic impermeable over gloves (nitrile, rubber, etc.), heavy-duty over gloves (cotton or leather), boot tray or bucket, one to two gallon hand-operated pressure sprayer, short handled scrubbing brushes and heavy duty plastic garbage bags.

Cleaning equipment: vacuum cleaner, water, low-pressure sprayer, power or fuel for sprayer, plastic sheeting (>2 mil thick), long-handled scrubbing brushes, sponges, buckets (pet wash), towels (disposable or cotton), heavy duty plastic garbage bags, berming material (e.g., 4x4s, sand, sand tubes, sand bags, etc.), framing materials to build containment structures, sump pump and power supply, and drums or plastic totes to contain spent cleaning and disinfection fluids.

Disinfectants: The choice of disinfectants will depend on the particular disease being addressed. State or federal veterinarians could be consulted during the local response planning process to identify specific disinfectants that could be used. Disinfectants can range from dilute solutions of common household products, such as bleach or vinegar to commercially available disinfectants. Broad-spectrum disinfectants, such as Virkon® may be an alternative to identifying and stockpiling multiple types of disease-specific disinfectants. In the Australian Veterinary Emergency Plan (Agriculture and Resource Management Council of Australia and New Zealand, 2000), many FADs are reviewed and disease-specific disinfectants are presented. The National Biosecurity Center has a disinfectant and animal disease database that can be accessed at http://www.biosecuritycenter.org/disinfect.php. This database allows an animal disease to be entered and all appropriate disinfectants are listed for that disease.

iii. **Methodology**

In cases where conventional on-site disposal methods (e.g., burial or burning) are deemed unfeasible, plans should be made for the safe, efficient transfer of carcasses and material to another site for disposal. Examples of situations in which off-site disposal may be considered include the following (from NAHEMS, 2005):

- Infectious material from laboratories in need of disposal and on-site disposal facilities are limited or unavailable.
- On-site constraints, such as insufficient space, unsuitable soil, a high water table or seasonal conditions, make on-site disposal unfeasible.
- All on-site locations are too close to areas of human habitation.
- Carcasses can be landfilled or rendered off-site more efficiently than they can be disposed of on the premises

When transporting contaminated material from affected premises to off-site locations, special procedures must be followed to prevent the spread of disease agents. Such procedures include the following (NAHEMS, 2005):

- Prior to loading, carcasses should be sprayed thoroughly with a disinfectant appropriate for the pathogen of concern.
- Infected material should be transported in a large-capacity vehicle (e.g., truck or dumpster) that is leak-proof or that has been made leak-proof by caulking the spaces around the tailgate and any other points of access via the side walls.
- The truck box or dumpster must be lined with a tough (3 mil or more) disposable polyethylene plastic sheet and sealed at the top. The plastic sheet must be large enough to cover the carcasses and to be secured to the sides and ends of the box or dumpster. A layer of absorbent material (e.g., wood shavings or sawdust) should be placed on top of the plastic liner to prevent punctures.
- The bottom of the container must have a layer of wood shavings, sawdust, hay or straw that is at least 1 foot thick to absorb fluids.
- The handling of carcasses should be kept to a minimum.
- Carcasses must be loaded into the truck box or dumpster carefully to avoid tearing the plastic lining.
- Every effort should be made to avoid puncturing the body cavity of carcasses as they are handled and loaded into the container. This will minimize the release of body fluids.
- In loading the vehicle, ample space must be left for the expansion of carcasses. At least 2 feet of space – depending on the air temperature and the distance to be traveled – should be left between the carcasses and the top, sides and ends of the truck box or dumpster. To minimize leakage, carcasses should not be opened before loading.
- After the carcasses are loaded, they should be sprayed with an appropriate disinfectant.
- After the carcasses have been sprayed with disinfectant, they should be covered with the plastic sheet, which should be attached to the sides and end of the truck box or dumpster in such a manner as to prevent leakage (double-sided tape may be used).
- The top of the plastic sheet must be sprayed with a disinfectant.
- After the top of the plastic sheet has been sprayed with disinfectant, a heavy tarp must be put over the entire container and secured.
- While the carcasses are being transported, speeds must be kept to a minimum to decrease the risk of spread of the disease agent en route to the disposal site.
- The vehicle operator must observe biosecurity measures upon entering and leaving the premises. Upon leaving the premises, the vehicle must be cleaned and disinfected.
- After the carcasses are unloaded, the vehicles must be cleaned and disinfected before they leave the disposal site.
- Vehicles used for transporting carcasses from an infected premise to an off-site disposal location should not be moved to an unaffected premise during the course of the outbreak.

For biosecurity reasons, carcass transport vehicles must be accompanied by one or more persons trained in biosecurity, as designated by the IC. Personnel transporting the carcasses should have sufficient disinfectant to clean up small spills of contaminated material that may be released during transport. These topics are addressed in detail in MDA SOG No. 004, Cleaning and Disinfection.

All vehicles, personnel and equipment must be cleaned and disinfected before they leave an infected premise and again after infected materials have been unloaded at the disposal site. Appropriate cleaning and disinfection (C&D) procedures must be followed for all personnel, vehicles and equipment (See MDA SOG No. 004, Cleaning and Disinfection).

If prompt carcass disposal is not possible, carcasses and other items awaiting disposal should be secured to prevent unauthorized access and potential disease spread to susceptible species. Disease transmission can occur via humans, domestic pets, wild animals, birds, fomites (inanimate objects or materials on which disease-producing agents may be conveyed), and other disease vectors, such as insects and rodents. Possible options for temporary storage include (NAHEMS, 2005) piling carcasses in a closed building; piling the carcasses outdoors, spraying them thoroughly with an appropriate disinfectant for the pathogen, and covering them securely with a tarpaulin; and using earth-moving equipment to arrange the carcasses in one or more piles and then cover them with at least three feet of soil. Control measures for insects and other fomites and vectors also should be considered for all of these options. A security guard on duty might prevent unwanted dissemination of carcasses and parts. Methods should be put in place to discourage scavengers from entering the temporary storage areas.

Disposal sites should be inspected regularly after closure to detect seepage, disturbance or other problems. IDOA and IEPA will determine disposal area closure requirements. If problems are noted, appropriate action should be taken (e.g., the building of storm water diversions, ditches or covering exposed materials). The overall objective is to allow the site to return as much as possible to its original contour and condition.

Where burial is used, the soil covering will probably need to be replenished periodically during the first year as the carcasses decompose and the soil settles. Settlement depressions should be avoided because they can collect surface water and increase percolation through the burial site and into groundwater.

Before permitting the restocking of the premises, the disposal site should be reinspected to detect any possible biological or physical risk to people or animals. Additional inspections should occur as necessary for several months following site closure. Inspection criteria will be determined by IDOA and will depend on the specific disease involved. Because the burial site is a potentially contaminated area, a security fence that keeps out people and animals should be in place for at least a year.

D. ASSOCIATED MATERIAL DISPOSAL

The following information identifies the personnel, equipment and other supporting services that may be necessary to properly dispose of materials associated with a FAD response and containment activity, other than the mortalities themselves.

i. Personnel

Specially trained workers will be needed to deal with on-farm materials, such as manure, dairy wastes and other associated materials. In most cases, producers or farm operators will provide this expertise. General laborers will be needed to support the producers, farm operators or other trained responders. Some members of an associated material disposal crew will require training in equipment and personal cleaning and disinfection.

Possible organizations that could be used for support include: producers, private contractors (heavy machinery operators), Fire Departments, County Highway Department, municipal public works departments, Illinois Department of Transportation (IDOT), Illinois National Guard, and the Illinois Department of Natural Resources. Volunteer organizations could also be used, as appropriate. If volunteer groups are utilized, the State's Attorney should evaluate the volunteers' liability relative to assisting the County with the response to a livestock or poultry emergency. Every effort should be made to limit or remove associated liabilities for volunteers.

Personnel will be assigned to associated material disposal sites on an as-needed basis and generally a single assignment will not span an entire day. Actual task-times TBD by the Planning and Operations Sections.

ii. Equipment

The following list of equipment could be used for associated material disposal:

Containers: Large volume polyethylene tote, metal or plastic 55-gallon drums, cardboard for plastic 30-gallon drums for PPE disposal, 30- to 85- gallon trash bags (≥ 5 mil. thick).

Lighting, Communications, **Biosecurity, PPE, Cleaning equipment, and Disinfectants**: All the same as listed in the previous discussion under Mortality Disposal.

iii. Methodology – Associated Material Disposal

Special disposal requirements may be established for materials associated with the response and mitigation of a FAD. Such materials may include cleaning and decontamination waste water; disposable PPE; milk; parlor wash water; liquid or slurry manure; eggs and hatchery waste; feed, grain and straw; silage; dry manure; wool and mohair; and artificial insemination materials (semen and ova). Generally, these materials will be handled differently than carcasses. Much of the following information is adapted from NAHEMS, 2005. In all cases, the Incident Commander may implement different or modified versions of the methodologies described below.

Cleaning and Decontamination Waste Water

Spent fluids from cleaning and decontamination should be containerized. These fluids should be considered contaminated and must be treated to inactivate disease agents in such a way as to render the wastewater acceptable for disposal in the nearby sanitary sewage system or for discharge onto and infiltration into the soil, if there are no

regulations against that and it is publicly acceptable. Treatment methods will be dictated by the FAD pathogen being addressed. Specific guidance will come from the Incident Commander.

In most cases, treatment for many of the FAD agents can be accomplished by lowering the fluids pH below 3.0 or raising it above 11.0. To be considered a hazardous waste by the U.S. Environmental Protection Agency, a liquid must have a pH of ≤2.0 or ≥12.5. pH adjustments can be made by adding sufficient citric acid to the wastewater to reduce its pH level to less than 3.0. If necessary, acidified wastewater can be neutralized (to a pH of ~7.0) through the addition of sodium hydroxide or sodium bicarbonate. The use of sodium hydroxide could present additional health and safety issues and should be coordinated with the incident's Safety Officer. If treatment requires elevation of the wastewater's pH to ≥10.0, sodium bicarbonate or sodium hydroxide can be used. In all cases where pH adjustments are used for treatment, the presence of soil and organic matter in the wastewater will increase its buffering capacity and require considerably greater amounts of pH adjuster. Treated wastewater may be able to be discharged into a sanitary sewer system or onto the soil and allowed to infiltrate. Risk from the wastewater can be further reduced by diluting it and by using larger than normal quantities of water in cleaning and decontamination operations.

Disposable Personal Protective Equipment

Disposable PPE will be sent to a municipal landfill. This material should be placed in an appropriate container and labeled. The container could be plastic trash bags (double bagged), or fiber or plastic drums. The label should describe the material contained and the accumulation date. These containers may require external cleaning and decontamination prior to their disposal, if the landfill is outside the infected zone.

Milk

Milk from the Control Area should be treated to inactivate any disease agents before disposal measures are implemented. Generally, treatment is accomplished by reducing the pH of the milk to less than 3.0 or increasing it to more than 11.0, and holding the milk at this level for an hour. Small quantities of milk held on premises can be disposed of, after disease agent deactivation, in a burial pit along with carcasses, if necessary. On premises where other disposal methods (e.g., air-curtain burning) are used, milk can undergo agent deactivation and subsequently be disposed of in a shallow burial pit, through the sanitary sewage system or in a sewage lagoon. If disposal in a sanitary sewer system is considered, permission must be obtained from the sanitary sewer system operator prior to disposal.

Treatment of large volumes of contaminated milk (e.g., at dairy plants or transfer facilities) generally involves disease agent inactivation by heating or pH adjustment. Treated milk can then be pumped into a shallow, fenced-off pit. After the milk has evaporated or seeped into the surrounding soil, the pit can be covered. If this option is considered, the pit must have appropriate run-on and run-off controls to prevent uncontrolled discharges.

Parlor Wash Water and Process Wastewater
Wastewater from dairies and dairy plants contaminated with infected milk must be treated to inactivate disease agents. Treatment should be sufficient to allow the wastewater to be disposed of in a municipal or industrial sewage system. Treatment can be accomplished by adding sufficient citric acid to the wastewater to reduce its pH level to less than 3.0. Risk from the wastewater can be further reduced by diluting it and by using larger than normal quantities of water in plant operations. If necessary, acidified wastewater can be neutralized (to a pH of ~7.0) through the addition of sodium hydroxide or sodium bicarbonate. The wastewater may then be discharged into the sewer system. If disposal in a sanitary sewer system is considered, permission must be obtained from the sanitary sewer system operator prior to disposal.

Liquid and Slurry Manure Storage
Manure in liquid or slurry form and wastewater from concentrated animal production operations are often stored in lagoons, earthen or concrete in-ground storages, and above-ground tanks before being land applied or brokered. When this material becomes contaminated with a disease pathogen, it will be necessary to isolate or quarantine the storage to prevent the spread of the pathogen to other animals. Due to technical difficulties of completely homogenizing the material in a containment and because of the material's high buffer capacity, treatment is generally not an option. The passage of time will eventually result in the destruction of the pathogen.

Adequate fencing is necessary as a part of this isolation or quarantine. Samples from the lagoon should be tested and found free of viable disease agents before the material is handled. If there is insufficient storage to contain normal precipitation without causing a release from the storage, liquid or slurry must be pumped into an alternative storage to provide adequate storage for natural precipitation events. Any additional containers also must be isolated or quarantined to prevent the exposure of susceptible animals to the pathogen.

When adequate space exists in the storage to accommodate natural precipitation and any wastewater resulting from cleaning and decontamination, the wastewater can be placed in the storage. If this method of wastewater storage is used, all cleaning and decontamination should be completed before sampling the containment since the wastewater from could contain appreciable amounts of detergent and disinfectant. Any routine operations of stirring or oxygenating the containment should continue during the cleaning and decontamination and storage operations.

If relatively small volumes of manure are removed from a containment to generate additional storage capacity, the removed material can be handled in a variety of ways. The pH can be adjusted to <3.0 or >11.0 by the addition of organic acid or alkaline reagents. If this method of handling is chosen, ensure that the material is mixed very thoroughly before taking the sample to test for pH. It is unlikely that a suitable site, free of susceptible livestock or wild species, could be found to spread untreated material from containment.

When composting is being used to dispose of animal carcasses, small quantities of a manure containment's contents can be added to the compost piles as an additional

nitrogen and moisture source. The balance of carbon, nitrogen and moisture content is critical to effective composting and, thus, manure additions should only be conducted by personnel with composting expertise. The containment contents to be added to a compost windrow should be agitated thoroughly to add as much oxygen as possible to the material. Any containment contents added to compost should not be contaminated with wastewater from cleaning and decontamination.

Egg and Hatchery Waste

Contaminated hatching eggs and hatchery waste should be buried after verifying that the eggs are no longer viable. Viable eggs and pips must be destroyed through maceration and then disposed of with other hatchery waste. Any live chicks would need to be first euthanized and then disposed of with the other hatchery waste. Landfilling also may be an acceptable option for disposal if transporting the material does not present an unacceptable biosecurity risk.

Feed, Grain, Hay, and Straw

Feed, grain, hay and straw that may have been contaminated should be burned or buried. This includes spilled material or storage piles/stacks over which the owner has been walking while removing hay or grain and any materials that could have been in direct contact with infected animals. For mass storages of these types of materials, an entire pile may not need to be disposed of. Where approved by the Incident Commander, only outer layers of a mass storage may need to be disposed of. General guidance for dealing with these materials is as follows: for loose piles, at least three feet of loose material; for hay or feed sack stacks, at least two layers of bales or one layer of sacks should be removed from these contact areas and burned, buried or landfilled. If composting is being used as a disposal method for animal carcasses, any of these materials could be carefully included in the compost as an additional carbon source or bulking agent.

If it is necessary to salvage feed, grain, hay or straw on a premise where large quantities are stored, the possibility and extent of contamination should be determined through careful study. Contaminated material should be burned, buried, composted or landfilled. The surfaces of remaining stacks of grain, hay, straw or sacked feed should be fumigated or sprayed thoroughly with an appropriate disinfectant. The disinfection or fumigation of feed and feed ingredients must be conducted with non-toxic (animal or human) or non-residue materials. Generally, the disinfection of feed and feed ingredients will not be cost effective.

Silage

Contaminated silage and contaminated portions of silage storages must be removed and destroyed or disinfected. The disinfection or fumigation of feed and feed ingredients must be conducted with nontoxic (animal or human) or non-residue materials. Generally, the disinfection of feed and feed ingredients will not be cost effective.

Contaminated silage can be buried. Depending on the nature of the disease agent, any remaining silage may need to be sealed off for a period of time before being used as animal feed. In some cases, it may be necessary to plow under field crops that may be contaminated.

Manure
Contaminated dry manure may be burned, buried, composted or landfilled. Manure that cannot be burned or buried should be isolated or quarantined to prevent exposure to animals. Depending on the nature of the disease agent and on environmental conditions, manure must remain composted for a period of time and reach specific temperatures in order to inactivate the disease agent.

Wool and Mohair
Wool and mohair are difficult to incinerate. Burial is the preferred method of disposal for these substances; however, they also can be landfilled.

Germplasm
If germplasm (e.g., semen or ova) is determined to pose a risk of agent spread, it should be disposed of safely. Incineration or burial is likely the best option. Any potentially contaminated germplasm that is not disposed of can be moved only under state or USDA permits.

E. HEALTH AND SAFETY

General first aid and access to emergency medical services must be provided during all activities associated with any disposal activities. This portion of a response would be coordinated by the Safety Officer for the incident.

Personnel working with contaminated material of carcass disposal should be provided PPE to minimize their exposure to contaminated materials and prevent the spread of the infectious agent. All workers at a disposal site should wear disposable PPE. Unless the infectious agent poses a public health hazard, or is stipulated by the Safety Officer or Incident Commander, respiratory protection may not be necessary. Disposal workers who could come in contact with potentially contaminated liquids should wear waterproof clothing (disposable is preferred; i.e., Tyvek® or Saranex®) or rain suits, with hoods, that can be disinfected and reused. Rubber gloves and rubber boots also will be needed. These items can be disinfected and reused. Under gloves, cotton or nitrile, should be worn under the outer rubber glove. Personnel also should wear hardhats fitted with face shields to protect their faces. In addition, dust masks can be worn to protect the workers' mouths and to prevent ingesting splashed materials.

F. COMMUNICATION

Because of the dynamic nature of an emergency response to a FAD event, the catastrophic mortality disposal plan must be implemented in an effective manner relative to the ever-changing understanding of the nature and extent of the disease in question. In order to allow the mortality disposal teams to quickly respond to changing field conditions, communication must be maintained through the chain of command. Real-time communication and pre-shift meetings constitute the required communication needed to support catastrophic mortality disposal associated with a FAD outbreak or other natural disaster resulting in large-scale livestock or poultry loss. The disposal of other associated material is generally less time critical and will be handled in a similar fashion.

G. DOCUMENTATION

Throughout the process of catastrophic mortality disposal, it will be necessary for the county to maintain various types of documentation. For indemnity payments or other forms of state or

federal reimbursement or cost sharing, it will be necessary to document the resources applied and expended by the county in providing catastrophic mortality disposal. These costs can include the number of animals and pounds of livestock disposed of, labor charges, equipment rentals or purchase costs of expendable equipment or supplies, subcontractor costs, or any other costs associated with providing the mortality disposal services. The collection and evaluation of this information will be the responsibility of the Finance and Administration Section.

Information on the types of materials, disposal methods and locations of other associated materials also need to be documented. This documentation provides a complete record of the FAD mitigation and will be important in post-event monitoring.

Due to the nature of an emergency response, it is critical to identify personnel who will be responsible for documenting these issues or monitoring and verifying that the needed documentation is being collected by other parties. In some cases, identifying a specific response job that includes documentation will be preferable, especially if personnel will be rotated through shifts and response jobs.

Possible actions or items that should be included in a documentation checklist include:

- Responder time (hours)
- Pounds of livestock or poultry disposed of at a location
- Number of responders
- Meals provided
- Identity of responders
- Location of each responder
- Mileage to the disposal area
- Equipment at each point
- Sanitation services provided
- Usage time for equipment
- Coordinates of disposal areas
- Specific quantities of expendables used
- Method of disposal
- Animal ownership identity
- Animal identity

Documentation also will be essential in order to track vehicles, heavy equipment, and people who exit and enter the disposal area.

Documentation should be maintained in written form. Video, photographs and recorded messages can be used to supplement the written documentation. Written documentation can be maintained in a logbook format, or by using documentation worksheets, or a combination of both. Documentation should be recorded with an ink pen, and any entry errors should have a single line drawn through them with the author's initials and date recorded at one end of the line. If a logbook is used, it should have numbered pages, and the spine should be sewn, making the removal of pages both difficult and obvious. Pages should never be removed from a logbook. Anyone making entries in the logbook should sign and date the bottom of each page. If documentation worksheets are used, the author should sign and date the bottom of each worksheet. Sets of logbooks and worksheets should be assigned to each response task (e.g., traffic control, decontamination/disinfection, mortality disposal, etc.) or a master set of logbooks and sheets can be maintained. Logbooks and worksheets should be assigned unique identification numbers. When the logbooks or a group of worksheets is issued from Planning (response related) or Finance and Administration (cost and time reporting related) to a responder, the identification numbers of the logbooks and worksheets should be recorded, and the recipient should sign them out in a document tracking log maintained by the issuing Section. This establishes a chain-of-custody for the documentation.

If pictures, video or taped messages or interviews are used to supplement the documentation record, the following information should be documented for each picture, video segment or audiotaped message or interview:

- Photographer or interviewer
- Subject
- Time and date
- Person interviewed (video or audio taped)
- Photo and film roll number
- Direction (photographs and video)
- General weather conditions (e.g., temperature, wind direction, humidity, sky condition, etc.)

Training

Personnel training will be a critical component of planning to initiate a catastrophic mortality disposal plan associated with a FAD outbreak or other natural livestock or poultry disaster. Training also will be necessary to deal with the other associated materials that require disposal. Besides the equipment-specific training required for the heavy equipment operators, all personnel associated with disposal will require training in: FAD, biosecurity, the operation and maintenance of cleaning and disinfection equipment, cleaning and disinfection procedures, associated environmental protection issues, and documentation requirements. Training in FAD and biosecurity can be provided at a local level by private, state or federal veterinarians. Local fire or emergency medical services personnel can provide training relative to cleaning and disinfection. In some counties, Military Reserve or National Guard units and also local health departments can assist with providing cleaning and disinfection training.

Public Information

Once the FAD response is initiated and quarantines are established, the County's Public Information Officer (PIO) will initiate the county's public information and media plan to inform the local community of the mortality disposal associated with the livestock or poultry emergency response. It is unlikely that disposal of other associated materials will require public information dissemination. This notification may involve public announcements via radio, television, web site, newspaper and signage announcing that catastrophic animal mortality is occurring, where it is occurring, and why it is necessary. Any information release should be coordinated with state or federal PIOs attached to Area Commands. Local responders should identify and make use of any state or federal pre-prepared information or press releases that could be used in responding to a catastrophic livestock or poultry event.

In general, response workers should be trained to refer any press or other project specific inquiries to the public relations officers designated for the response.

Mental Health Services

A response dealing with an outbreak of a FAD can result in the widespread euthanasia of livestock and poultry over a large area. Natural disasters, such as floods or tornadoes, also can result in large-scale poultry or livestock losses. The major differences between the local impacts of a FAD versus a natural disaster are: (1) recovery from a FAD will be protracted, possibly over months; (2) a FAD will generally impact a much greater area; and (3) a FAD is likely to require the widespread euthanasia of entire herds or flocks.

The outbreak of a FAD or other livestock- or poultry-related disaster will generally disrupt family and community routines. In many cases, this will result in a subsequent disruption of family and community dynamics. For example, the mass mortality of herds or flocks could deprive producers of a means to generate income, and it may be perceived as a total loss of their livelihood. The response to a FAD can also have a negative impact on the community infrastructure (e.g., quarantines). In addition, the local community will be interacting with an influx of strangers and the associated bureaucracies of any state or federal programs or agencies responding to the disaster. These factors can combine to create stressors for responders and the impacted community.

The stress associated with a FAD outbreak, or livestock or poultry natural disaster, can result in physical, mental and behavioral reactions of the responders and the community members. In the United Kingdom, during the 2001 Foot-and-Mouth Disease (FMD) outbreak, situations where producers considered and, in some cases, committed suicide, were unanticipated results of the stress. Similarly, personnel involved in mass euthanasia of infected animals can often become depressed.

Generally, anyone associated with a FAD outbreak or livestock or poultry natural disaster will be affected by it. The degree of impact will vary greatly. While, in many cases, the stress will decrease over time, counties should be prepared to offer crisis intervention and counseling, and other forms of support to the community and responders throughout the entire response. In some cases, longer-term assistance will be required.

Providing this type of community and individual response will require specially trained personnel. Local mental health professionals (public and private), hospitals, and state and federal mental health agencies can all provide these personnel. In addition, law enforcement agencies and some volunteer organizations have personnel trained to provide this support. Examples of volunteer organizations that could assist with providing the mental health component of a FAD or natural livestock or poultry response could include

local religious leaders and crisis counselors from volunteer organizations, such as the American Red Cross.

The scope and duration of these services will be tailored to each event. However, it will be critical to incorporate the announcement of these services with the public relations plan and information disseminated to the community. Letting the impacted citizens know what services are available and how to access them will be imperative for any mental health assistance program to succeed.

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- NAHEMS. (2005). *Disposal.* United States Department of Agriculture. April, 2005.
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Illinois Environmental Protection Agency

OPEN BURNING OF DISASTER DEBRIS - INFORMATION STATEMENT

Tree limbs, brush, natural wood and plant debris

- Burned on site where generated: No Permit Necessary
- At community sites under supervision by unit of local government: No Permit Necessary

Agricultural Waste (bags, cartons, dry bedding, structural materials and crop residue)

- Burned on site where generated: No Permit Necessary

Clean wood building debris, lumber, and canvas sandbags

- Permit is necessary from Illinois EPA: Permit Needed

If using an **Air Curtain Destructor**: The owner or operator must obtain an open burning permit from the Illinois EPA and comply with the requirements for local siting, if applicable. Note that under the Emergency Power Act, the Governor may suspend the requirements for a permit and siting when an area has been declared a disaster.

- If permit is required, complete an Open Burning Permit Application Form found at http://www.epa.state.il.us/air/permits/openburn/index.html
- FAX completed form to (217) 524-5023.
- *Units of local government can apply for multiple burn locations under a single permit application; and are encouraged to do so.*
- *Applicants other than units of government can also apply for multiple burn locations under a single permit application if the applicant provides proof along with the application that the proposed activities have been coordinated with the unit of local government and the local Fire Protection District.*
  - The Illinois EPA typically issues these permits within 1 - 2 days after receipt of the application; however, upon request the Illinois EPA can expedite permits in the event of an emergency.
  - These permits are typically issued for a short period (e.g., covering 30 to 90 days) after which time they expire.

GENERAL CONDITIONS for the Open Burning of Disaster Debris
1. Coordinate the burn with the local Fire Protection District.
2. Conduct the burn when the wind is blowing away from roadways, railroad tracks, airfields, and populated areas.
3. Provide on-site supervision of the burn location.
4. Burning occur only from approximately 9 am to 6 pm to get the best natural smoke dispersion conditions

Asbestos containing materials and Tires – Burning Not Allowed under any Circumstances!!!

- Call Floyd McKinney at (217) 782-2113 for additional information or to request an expedited permit in the event of an emergency.
- In the event that Floyd McKinney is not available, a secondary contact in the event of an emergency is John Blazis at (217) 524-0636.

Last revised: April 11, 2008

State of Illinois
Pat Quinn, Governor
Illinois Environmental Protection Agency
John Kim, Interim Director

Fact Sheet

Debris Issues from Storms or Floods

Dealing with Flood Debris and Water Concerns

Even after floodwaters recede and the storms have passed debris remains that can cause serious pollution problems and potentially result in ill health effects. The Illinois Environmental Protection Agency (Illinois EPA) has developed this fact sheet to outline what you can do to ensure that the waste and debris are disposed of in a safe and environmentally sound manner. Please follow these guidelines to dispose of the debris.

Any questions about which materials can be landfilled, burned or recycled will be answered promptly by calling:

Landfill waste material – 217-524-3300
Open burning waste – 217-782-2113
Immediate emergency – 800-782-7860
Outdoor chemical contamination – 217-782-3637.

Recycling Flood Waste

Household appliances, also known as "white goods," can be recycled by taking them to a local scrap dealer, who will remove potentially harmful components. For information on scrap dealers in your area check the yellow pages or call a local appliance retailer.

Tires must be disposed at a registered commercial processing facility. Units of local government may accumulate used and waste tires recovered via flood cleanup. It is important to drain all used tires collected from the flood of standing water and to store them in a manner that prevents the further accumulation of water. Contact the Illinois EPA at 217/785-8604 for further information and possible assistance.

In addition, we encourage other recyclable materials to be separated and recycled such as glass, metal debris and plastics.

Flood Water Sand Re-use and Disposal

Flood water sand may be contaminated with human and animal waste, oil and gasoline residue, and farm chemicals such as fertilizers, pesticides and herbicides.

- Sand or sandbags that did <u>not</u> contact floodwater can be reused without restrictions;
- Sand or sandbags that <u>contacted</u> floodwater should not be reused in ways that would involve direct human contact, such as in children's play areas or in residential gardening;
- Sand or sandbags that are visually contaminated, with oil or fecal matter, for example, should be disposed as waste at a landfill.

Visual inspection of the sand as well as local emergency responder knowledge can be used to assist in determining if sand has come into

contact with flood waters. When in doubt, it is generally safer to assume that the sand has come into contact with flood waters.

Household Hazardous Flood Waste Disposal

Household hazardous waste (HHW) and other chemical products should be disposed of properly to avoid health and pollution risks. HHW should be placed in plastic bags and left with traditional household garbage at the curb for normal collection.

Sealed Drum and Propane Tank Disposal

Sealed drums, propane tanks and other pressurized gas cylinders with unknown contents should not be handled by untrained persons. Please notify the Illinois EPA Office of Emergency Response at 217-782-3637 or Illinois Emergency Management Agency at 800-782-7860.

To dispose of propane tanks, contact the nearest propane distributor. Propane tanks have serial numbers that will allow for identification of tank owners and locations.

Landfilling Flood Waste

You may dispose of the following items in your local landfill: lumber, sandbags, plastic sheeting, shingles, insulation, animal carcasses, grain, animal feed, food, carpet, furniture, metal debris and machinery. Additionally, you may want to check with the operator of your local landfill to see if trees, branches, brush and other flood debris similar to landscape waste may be temporarily accepted there for disposal and, if so, for how long. Landscape compost facilities may also accept this type of material as long as it is not mixed with other types of flood debris.

Flood Sediments

Care should be taken not to cause nuisance conditions in removing and accumulating flood sediment. If the sediments are contaminated and removed from the property at which they were found after the flood, these materials must be disposed of in a permitted landfill.

Burning Flood Waste

Tree limbs, brush, natural wood and plant debris:
- Burned on site where generated: No Permit Necessary
- At community sites under supervision by unit of local government: No Permit Necessary

Agricultural Waste (bags, cartons, dry bedding, structural materials and crop residue):
- Burned on site where generated: No Permit Necessary

Clean wood building debris, lumber, and canvas sandbags:
- Permit is necessary from Illinois EPA: Permit Needed

If Permit is Required:

Complete an Open Burning Permit Application Form found at:
http://www.epa.state.il.us/air/permits/openburn/index.html

General Conditions for the Open Burning of Disaster Debris:

1) Coordinate the burn with the local Fire Protection District;
2) Conduct the burn when the wind is blowing away from roadways, railroad tracks, airfields, and populated areas;

..Burning Flood Waste,

contd.

3) Provide on-site supervision of the burn location;
4) Burning should occur only from approximately 9 am to 6 pm to achieve the best natural smoke dispersion conditions.

Asbestos-containing materials and tires – burning not allowed under any circumstances!

Drinking Water Concerns After the Flood

Public Water Supplies: Be sure to listen to special announcements about local boil orders that may be in effect regarding public water supplies. If a local advisory is issued, the safest route is to drink bottled water or juices. If you must use water during boil order conditions, it must be boiled vigorously for at least five minutes. Water used to make ice, brush teeth, or wash dishes must also be boiled.

Private Wells: Your local public health department or the Illinois Department of Public Health regional office will provide you with information and assistance in testing your well. Additional tips on safety of private wells may be found at: http://www.epa.state.il.us/well-water/index.html.

Is there a concern about oil from electrical transformers on downed power poles leaking into the environment?

Yes. After storms, electrical transformers on downed power poles have the potential to leak oil into the environment. Some transformers still contain polychlorinated biphenyls (PCBs), which are persistent and toxic environmental pollutants. If you see downed transformers, please alert local officials who can then contact the appropriate electrical utility company about disposal or cleanup. If you observe leaks from a transformer, you may contact an Illinois EPA Regional office during business hours at http://www.epa.state.il.us/land/regions/ or call Illinois Emergency Management Agency at 800-782-7860 or 217-782-7860 and time.

What about electronics waste?

A new law went into effect at the beginning of 2012 that bans most electronics items from landfills. You will find information on the link http://www.epa.state.il.us/land/electronic-waste-recycling/index.html, and you may see a list of retailers that take certain electronics at http://epadata.epa.state.il.us/land/eWaste/crr-list.asp.

Electronics Banned from Illinois Landfills as of January 2012	
Televisions	Monitors
Printers	Computers (laptop, notebook, tablet, desktop)
Electronic Keyboards	Facsimile Machines
Videocassette Recorders	Portable Digital Music Players
Digital Video Disc Players & Recorders	Video Game Consoles
Small Scale Servers	Scanners
Electronic Mice	Digital Converter Boxes
Cable Receivers	Satellite Receivers
Cell phones	

FEMA
DISASTER ASSISTANCE POLICY

I. TITLE: Mutual Aid Agreements for Public Assistance and Fire Management Assistance

II. DATE: AUG 13, 2007

III. PURPOSE:

This policy specifies criteria by which the Federal Emergency Management Agency (FEMA) will recognize the eligibility of costs under the Public Assistance (PA) Program and the Fire Management Assistance Grant (FMAG) Program incurred through mutual aid agreements between applicants and other entities.

IV. SCOPE AND AUDIENCE:

This policy is applicable to all major disasters, emergencies, and fire management assistance declarations declared on or after the date of this policy. This policy is intended for personnel involved in the administration of the PA and the FMAG programs.

V. AUTHORITY:

This policy applies to emergency work authorized under Sections 403, 407, 420, and 502, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), 42 U.S.C. 5121-5206, and the implementing regulations of 44 CFR § 204 and § 206.

VI. BACKGROUND:

Many State, Tribal, and local governments and private nonprofit organizations enter into mutual aid agreements to provide emergency assistance to each other in the event of disasters or emergencies. These agreements often are written, but occasionally are arranged verbally after a disaster or emergency occurs. This policy addresses both written and verbal mutual aid agreements and the eligibility of costs under the Emergency Management Assistance Compact (EMAC).

The National Incident Management System (NIMS) maintains that states should participate in these agreements and should look to establish intrastate agreements that encompass all local jurisdictions. The Incident Management Systems Division will be responsible for developing a national system of standards and guidelines as described in the NIMS as well as the preparation of guidance to assist agencies in implementing the system. This policy supports the NIMS by

establishing standard criteria for determining the eligibility of costs incurred through mutual aid agreements.

VII. POLICY:

A. Terms Used in this Policy:

1. *Backfill.* Replacement personnel who perform the regular duties of other personnel while they are performing eligible emergency work under the PA or FMAG programs.

2. *Declared Emergency or Major Disaster.* An emergency or major disaster as defined at 44 CFR § 206.2 (a)(9) and (17), respectively.

3. *Declared Fire.* An uncontrolled fire or fire complex, threatening such destruction as would constitute a major disaster for which the Disaster Assistance Directorate Assistant Administrator has approved a declaration in accordance with the criteria listed in 44 CFR § 204.21.

4. *Emergency Management Assistance Compact (EMAC).* This type of interstate mutual aid agreement allows states to assist one another in responding to all kinds of natural and man-made disasters. It is administered by the National Emergency Management Association (NEMA).

5. *Incident Commander.* The ranking official responsible for overseeing the management of emergency or fire operations, planning, logistics, and finances of the field response.

6. *Providing Entity.* The entity providing mutual aid assistance to a Requesting Entity pursuant to a local or statewide mutual aid agreement.

7. *Requesting Entity.* An entity that requests mutual aid assistance from a Providing Entity for emergency work resulting from a declared fire, emergency or major disaster within its legal jurisdiction. The requesting entity is eligible to receive FEMA assistance for the eligible mutual aid activities performed by the providing entities.

8. *Intra-state Mutual Aid*. Mutual Aid that supports local and regional mutual aid efforts within a State as well as regional mutual aid agreements and compacts involving local

jurisdictions that cross State boundaries, or are adjacent to a neighboring State (i.e. Kansas City, Kansas/Kansas City, Missouri , etc.).

9. *Inter-state Mutual Aid.* Mutual Aid that supports national mutual aid efforts requested directly between two or more States or territories through established Multi-agency Coordination Systems as directed by approved mutual aid agreements or compacts (i.e. EMAC), etc.

B. General:

1. To be eligible for reimbursement by FEMA, the mutual aid assistance should have been requested by a Requesting Entity or Incident Commander; be directly related to a Presidentially-declared emergency or major disaster, or a declared fire; used in the performance of eligible work; and the costs must be reasonable.

2. FEMA will not reimburse costs incurred by entities that "self-deploy" (deploy without a request for mutual aid assistance by a Requesting Entity) except to the extent those resources are subsequently used in the performance of eligible work at the request of the Requesting Entity or Incident Commander.

3. The reimbursement provisions of a mutual aid agreement must not be contingent on a declaration of an emergency, major disaster, or fire by the Federal government.

4. This policy is applicable to all forms of mutual aid assistance, including agreements between Requesting and Providing Entities, statewide mutual aid agreements, and the mutual aid services provided under the EMAC.

C. Pre-Event Written Mutual Aid Agreements.

FEMA recognizes mutual aid agreements between Requesting and Providing Entities, and statewide mutual aid agreements wherein the State is responsible for administering the claims for reimbursement of Providing Entities. In addition, FEMA recognizes the standard EMAC agreement as a valid form of mutual aid agreement between member states.

1. FEMA encourages parties to have written mutual aid agreements in place prior to a declared fire, emergency, or major disaster.

a. When a pre-event written agreement exists between a Requesting Entity and a Providing Entity, the Providing Entity may be reimbursed through the Requesting Entity. In

these circumstances, the Requesting Entity should claim the eligible costs of the Providing Entity, pursuant to the terms and conditions of the mutual aid agreement and the requirements of this policy, on its subgrant application, and agree to disburse the Federal share of funds to the Providing Entity.

b. When a statewide pre-event mutual aid agreement exists that designates the State responsible for administering the reimbursement of mutual aid costs, a Providing Entity may apply, with the prior consent of the Requesting Entity, for reimbursement directly to the Grantee, in accordance with applicable State law and procedure. In such cases, the Providing Entity should obtain from the Requesting Entity the certification required in section H. (3) of this policy and provide it to the State as part of its reimbursement request.

2. FEMA encourages parties to address the subject of reimbursement in their written mutual aid agreements. FEMA will honor the reimbursement provisions in a pre-event agreement to the extent they meet the requirements of this policy.

3. When a pre-event agreement provides for reimbursement, but also provides for an initial period of unpaid assistance, FEMA will pay the eligible costs of assistance after such initial unpaid period.

4. When a pre-event agreement specifies that no reimbursement will be provided for mutual aid assistance, FEMA will not pay for the costs of assistance.

D. Post-Event Mutual Aid Agreements.

1. When the parties do not have a pre-event written mutual aid agreement, or where a written pre-event agreement is silent on reimbursement, the Requesting and Providing Entities may verbally agree on the type and extent of mutual aid resources to be provided in the current event, and on the terms, conditions, and costs of such assistance.

2. Post-event verbal agreements must be documented in writing and executed by an official of each entity with authority to request and provide assistance, and provided to FEMA as a condition of receiving reimbursement. The agreement should be consistent with past practices for mutual-aid between the parties. A written post-event agreement should be submitted within 30 days of the Requesting Entity's Applicant's Briefing.

E. Force Account Labor Costs.

1. The straight- or regular-time wages or salaries of a Requesting Entity's permanently employed personnel performing or supervising emergency work are not eligible costs, pursuant to 44 CFR § 206.228(a)(4), and § 204.43(c), even when such personnel are reassigned or relocated from their usual work location to provide assistance during an emergency. Overtime costs for such personnel are eligible and may be submitted as part of a subgrant application.

2. The labor force expenses of a Providing Entity will be treated as contract labor, with regular time and overtime wages and certain benefits eligible, provided labor rates are reasonable. The labor force expenses of the Providing Entity will not be treated as contract labor if the labor force is employed by the same local or State government as the Requesting Entity.

3. In circumstances where a Providing Entity is also an eligible applicant in its own right, the determination of eligible and ineligible costs will depend on the capacity in which the entity is incurring costs. As stated in paragraphs E(1) and (2), an applicant's straight-time wages are not eligible costs when the applicant is using its permanently employed personnel for emergency work in its own jurisdiction.

4. Requesting and Providing Entities may not mutually deploy their labor forces to assist each other so as to circumvent the limitations of paragraph E(1) or (2) of this policy.

5. The straight- or regular-time wages or salaries for backfill personnel incurred by Providing Entities are not eligible for reimbursement. However, the overtime portion of the replacement personnel's salary is considered an additional cost of deploying personnel who perform eligible work and is eligible for reimbursement under this policy.

F. Types of Mutual Aid Work

There are two types of mutual aid work eligible for FEMA assistance: Emergency Work and Grant Management Work. Both are subject to the eligibility requirements of the respective PA and FMAG programs:

1. Emergency Work. Mutual aid work provided in the performance of emergency work necessary to meet immediate threats to life, public safety, and improved property, including firefighting activities under the FMAG program, is eligible.

a. Examples of eligible emergency work include:

(i) Search and rescue, sandbagging, emergency medical care, debris removal;

(ii) Reasonable supervision and administration in the receiving State that is directly related to eligible emergency work;

(iii) The cost of transporting equipment and personnel by the Providing Entity to the incident site, subject to the requirements of paragraphs B(1), (2) and (3) of this policy;

(iv) Costs incurred in the operation of the Incident Command System (ICS), such as operations, planning, logistics and administration, provided such costs are directly related to the performance of eligible work on the disaster or fire to which such resources are assigned;

(v) State Emergency Operations Center or Joint Field Office assistance in the receiving State to support emergency assistance;

(vi) Assistance at the National Response Coordination Center (NRCC), and Regional Response Coordination Center (RRCC), if requested by FEMA (labor, per diem and transportation);

(vii) Dispatch operations in the receiving State;

(viii) Donations warehousing and management (eligible only upon approval of the Assistant Administrator of the Disaster Assistance Directorate);

(ix) Firefighting activities; and,

(x) Dissemination of public information authorized under Section 403 of the Act.

b. Examples of mutual aid work that are not eligible, include:

(i) Permanent recovery work;

(ii) Training, exercises, on-the-job training;

(iii) Long-term recovery and mitigation consultation;

(iv) Costs outside the receiving State that are associated with the operations of the EMAC system (except for FEMA facilities noted in paragraph F.(1)(a)(v) and (vi) above);

(v) Costs for staff performing work that is not eligible under the PA or the FMAG programs;

(vi) Costs of preparing to deploy or "standing-by" [except to the extent allowed in the FMAG program pursuant to 44 CFR § 204.42(e)];

(vii) Dispatch operations outside the receiving State;

(viii) Tracking of EMAC and U.S. Forest Service Incident Cost Accounting and Reporting System (ICARS) resources; and

(ix) Situation reporting not associated with ICS operations under VII(F)(iv) of this policy.

2. Grant Management Work. For PA only, work associated with the performance of the Grantee's responsibilities as the grant administrator, as outlined in 44 CFR § 206.202(b). Use of EMAC-provided assistance to perform these tasks is eligible mutual aid work.

G. Eligible Applicants.

1. Only Requesting Entities are eligible applicants for FEMA assistance. With the exception of G.(2), below, a Providing Entity must submit its claim for reimbursement to a Requesting Entity.

2. States may be eligible applicants when statewide mutual aid agreements or compacts authorize the State to administer the costs of mutual aid assistance on behalf of local jurisdictions.

H. Reimbursement of Mutual Aid Costs.

1. Requesting and Providing Entities must keep detailed records of the services requested and received, and provide those records as part of the supporting documentation for a reimbursement request.

2. A request for reimbursement of mutual aid costs must include a copy of the mutual aid agreement - whether pre- or post-event - between the Requesting and Providing Entities.

3. A request for reimbursement of mutual aid costs should include a written and signed certification by the Requesting Entity certifying:

a. The types and extent of mutual aid assistance requested and received in the performance of eligible emergency work; and

b. The labor and equipment rates used to determine the mutual aid cost reimbursement request.

4. FEMA will not reimburse the value of volunteer labor or the value of paid labor that is provided at no cost to the applicant. However:

a. To the extent the Providing Entity is staffed with volunteer labor, the value of the volunteer labor may be credited to the non-Federal cost share of the Requesting Entity's emergency work in accordance with the provisions of Disaster Assistance Policy #9525.2, Donated Resources.

b. If a mutual aid agreement provides for an initial period of unpaid assistance or provides for assistance at no cost to the Requesting Entity, the value of the assistance provided at no cost to the Requesting Entity may be credited to the non-Federal cost share of the Requesting Entity's emergency work under the provisions of Disaster Assistance Policy #9525.2. Donated Resources.

5. Reimbursement for work beyond emergency assistance, such as permanent repairs, is not eligible for mutual aid assistance.

6. For PA only, reimbursement for equipment provided to a Requesting Entity will be based on FEMA equipment rates, approved State rates or, in the absence of such standard rates, on rates deemed reasonable by FEMA.

7. For FMAG only, reimbursement for equipment provided to a Requesting Entity will be based on 44 CFR § 204.42 (b)(3) and (4).

8. For PA only, reimbursement for damage to equipment used in emergency operations will be based on Recovery Policy #9525.8, Damage to Applicant Owned Equipment.

9. For FMAG only, reimbursement or replacement of equipment damaged or destroyed in the course of eligible firefighting activities will be based on 44 CFR § 204.42 (b)(5), and (6).

10. For PA only, reimbursement for equipment purchased by a subgrantee to support emergency operations will be based on Recovery Policy #9525.12, Disposition of Equipment, Supplies, and Salvaged Materials.

VIII. RESPONSIBLE OFFICE: Disaster Assistance Directorate (Public Assistance Division)

IX. SUPERSESSION: This policy updates and replaces RP9523.6, Mutual Aid Agreements for Public Assistance and Fire Management Assistance, dated September 22, 2004, and the Mutual Aid Policy Clarification Memorandum, dated March 15, 2005.

X. REVIEW DATE: Three years from date of publication.

Carlos J. Castillo
Assistant Administrator
Disaster Assistance Directorate

FEMA RECOVERY

FACT SHEET RP9580.201

Debris Contracting Guidance

Overview

Debris removal and monitoring contracts must meet rules for Federal grants, as provided for in Title 44 Code of Federal Regulations (CFR) §13.36, **Procurement** in order to be eligible for reimbursement under the Public Assistance Program. This fact sheet assists Public Assistance applicants with meeting procurement requirements established in 44 CFR Part 13, as well as other Public Assistance Program eligibility requirements, when procuring debris removal and monitoring contracts. Public Assistance applicants should comply with their own procurement procedures in accordance with applicable State and local laws and regulations, provided that they conform to applicable Federal laws and standards identified in Part 13.

Contract Procurement

To be eligible for Federal funding, applicants must comply with federal procurement standards as outlined in 44 CFR, §13.36, **Procurement**. Essential elements of the procurement process for debris removal and monitoring contracts include: competition; a clear and definitive scope of work; qualified bidders (documented by licenses, financial records, proof of insurance, and bonding, as applicable); a cost analysis to demonstrate cost reasonableness; compliance with all relevant local, State, and Federal requirements, laws and policies; and, clear documentation of the process/rationale followed in making procurement decisions. Federal regulations require applicants for Public Assistance grants to take the necessary steps to ensure there are opportunities to award contracts to minority, women-owned, and Labor Surplus Area businesses and firms whenever possible. This includes contracts with local organizations, firms, and individuals that support response and recovery activities in a declared major disaster or emergency area. Applicants' legal representatives should review their procurement process and any contract to be awarded to ensure they are in compliance with all Federal, State, and local requirements. Procurement policies must include procedures to handle protests and disputes related to contracts awarded. ***FEMA will, when requested by applicants, assist in the review of debris removal contracts. However, such a review does not constitute approval.***

In order to ensure that debris removal and monitoring contracting costs are eligible, applicants should:

☐ Use competitive bidding procedures to meet procurement requirements for Federal grants, as established in 44 CFR § 13.36, *Procurement*.

☐ Only use abbreviated emergency procurement procedures that include an expedited competitive bid process if time does not allow for more stringent procedures and if they are allowed under State or local laws, codes, or ordinances.

☐ Provide a clear and definitive scope of work in the request for proposals/bids.

☐ Require bidders to provide copies of references, licenses, financial records, and proof of insurance and bonding.

☐ Ensure that debris removal or monitoring contract costs are reasonable and necessary as defined and required by OMB Circular A-87 and 44 CFR Part 13. *Competitively bid contracts that comply with Federal, State, and local procurement regulations and procedures will establish reasonable costs for the work.*

☐ Complete and document a cost analysis to demonstrate price reasonableness on any contract or contract modification where adequate price competition is lacking, as detailed in 44 CFR § 13.36(f). See Attachment 1, *Debris Removal Contract Cost Analysis*, for guidance on completing a cost analysis.

Cost Analysis

Pursuant to 44 CFR § 13.36, **Procurement**, Public Assistance applicants must complete a cost analysis for *any contract or contract modification where price competition is lacking*. Failure to complete a cost analysis may jeopardize FEMA Public Assistance grant funding. Applicants are encouraged to complete a cost analysis using the attached *Debris Removal Contract Cost Analysis*. Applicants are also encouraged to file documentation supporting the cost analysis with all associated contract documents.

Upon request, FEMA will provide guidance as necessary in the cost analysis process. Such a review does not constitute approval when determining the eligibility of costs for reimbursement under FEMA's Public Assistance Program.

Pre-Disaster and Standby Contracts

Applicants are encouraged to pre-qualify debris removal contractors prior to an event and solicit bid prices from this list of contractors once an event has occurred to ensure competitive bidding and obtain reasonable market prices at the time of work performed. The solicitation for pre-qualifying contractors

should adequately define in the proposed scope of work all potential debris types, anticipated haul distances, and size of events for which a contract may be activated.

Debris Removal Contract Provisions

All debris removal contracts must contain the following provisions:

☐ All payment provisions must be based on unit prices (volume or weight).

☐ Payments based on time and material costs are limited to work performed during the first 70 hours of actual work following a disaster event.

> *Note:* FEMA will typically only reimburse applicants for a time and materials contract for eligible debris clearance during the first 70 hours following a declared disaster. After 70 hours of work, the applicant should have sufficient information on the scope of work necessary to complete debris collection and disposal, and a basis for estimating a reasonable cost for the contract work to effectively solicit a lump sum or unit price contract. For some types of debris work time and materials contracts may be the most cost-effective and best suited to the type of work. Applicants should work closely with the State and FEMA when awarding such contracts to ensure eligibility requirements are met.

☐ Payment will be made only for debris that FEMA determines eligible. (This is an optional provision to protect the applicant.)

☐ Contractors must submit invoices regularly and for no more than 30-day periods.

☐ A "Termination for Convenience" clause allowing contract termination at any time for any reason.

☐ A time limit on the period of performance for the work to be done.

☐ A subcontract plan including a clear description of the percentage of the work the contractor may subcontract out and a list of subcontractors the contractor plans to use.

☐ A requirement that the contractor use mechanical equipment to load and reasonably compact debris into the trucks and trailers.

☐ A requirement that the contractor provide a safe working environment.

☐ A requirement that all contract amendments and modifications will be in writing.

☐ A requirement that contractors must obtain adequate payment and performance bonds and insurance coverage.

Debris Monitoring Contracts

Applicants must monitor all debris removal operations. Applicants must document all eligible debris removal expenses as a condition of receiving Public Assistance funding. Applicants may use contractors to monitor their debris removal operations. In addition to the guidance provided above, applicants should consider the following when procuring debris monitoring contracts:

☐ Debris monitoring contracts must be competitively procured as required by 44 CFR § 13.36, **Procurement**.

☐ Debris monitors should not be employed by or affiliated with the debris removal contractor.

☐ Debris monitoring contracts are typically time and materials contracts and must contain a not-to-exceed clause, pursuant to 44 CFR § 13.36, **Procurement**.

☐ The contract should include a requirement that the contractor provide a safe working environment, including properly constructed monitoring towers.

☐ Use of a load ticket system to record with specificity (e.g., street address, GPS coordinates) where debris is collected and the amount picked up, hauled, reduced, and disposed of.

☐ Debris monitors should be trained and possess skills adequate to fulfill the duties of the job. Labor rates should be commensurate with the skill level required by the job function. **Professional engineers and qualifications are not required to perform monitoring duties.**

☐ The contractor should demonstrate that its staff is familiar with FEMA debris removal eligibility criteria.

Avoidance Checklist

☐ **DO NOT:** Award a debris removal or debris monitoring contract on a sole-source basis.

☐ **DO NOT:** Sign a contract (including one provided by a contractor) until your legal representative has thoroughly reviewed it.

☐ **DO NOT:** Allow any contractor to make eligibility determinations; only FEMA has authority to make final eligibility determinations.

☐ **DO NOT:** Accept any contractor's claim that it is "FEMA certified." FEMA does not certify, credential, or recommend debris contractors.

☐ **DO NOT:** Award a contract to develop and manage debris management sites, unless the debris sites are part of your approved debris management plan or you contact the State or FEMA for technical assistance concerning the need for such an operation. Temporary Debris Storage and Reduction sites are not always necessary.

☐ **DO NOT:** Allow separate line item payment for stumps 24 inches and smaller in diameter; you should treat these stumps as normal debris.

☐ **DO NOT:** "Piggyback" or utilize a contract awarded by another entity. "Piggybacking" may be legal under applicable state law; however, the use of such a contract may jeopardize FEMA funding because these contracts do not meet requirements for competition established in 44 CFR § 13.36. If an applicant requests reimbursement for costs it incurred from a piggyback contract, FEMA will determine the reasonable cost for the performance of eligible work.

☐ **DO NOT:** Award pre-disaster/stand-by contracts with mobilization costs or unit costs that are significantly higher than what they would be if the contract were awarded post-disaster. Such contracts should have variable mobilization costs depending upon the size of the debris work that may be encountered.

☐ **DO NOT:** Allow for markups due to errors in volume calculations.

☐ **DO NOT:** Allow for miscellaneous items, or for contract contingencies of any kind, including "unknowns."

See Attachment 2, *Debris Operations Contract Bid Sheet*, for additional guidance on debris contracts.

Deborah Ingram
Acting Assistant Administrator
Recovery Directorate

9/27/10
Date

Attachments (2)

FEMA RECOVERY

FACT SHEET 9580.201

ATTACHMENT 1:
Debris Removal Contract Cost Analysis

This guidance is intended to assist Public Assistance applicants in complying with the requirements of 44 CFR Part 13.36, **Procurement**, for debris operation contracts or contract modifications where adequate price competition is lacking.

When to Conduct a Cost Analysis

Applicants should complete a cost analysis when one of the following conditions applies:

- The applicant has not received two or more priced bids from responsible bidders after soliciting a number of sources;
- Services can only be provided by a single source;
- The awarding agency authorizes noncompetitive proposals;
- The public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation; or
- The procurement is a contract modification or change order.

General Contract Review

In order to conduct a cost analysis, applicants should request cost documentation from their debris contractors. This documentation should contain a detailed breakdown of costs for each item of work activity and information on how the contractor arrived at its costs, including, but not limited to:

- Number of labor hours,
- Labor rates,
- Materials (types, quantities, and costs),
- Equipment hours,
- Equipment rates, or
- Unit costs

Applicants are encouraged to verify the mathematical accuracy of the cost documentation by recalculating the contractor's cost figures. Applicants should also review the proposed contract's scope

of work for cost reasonableness to ensure that the proposed scope does not fall under an existing contract.

Applicants should ensure that the contract does not use prohibitive contracting methods per 44 CFR § 13.36(f)(4), including:

1. Cost plus a percentage of cost – this is a contract that provides a specified percentage profit over and above the actual costs of construction; and
2. Percentage of construction cost.

Labor Rate Analysis

Applicants may determine the reasonableness of labor rates by:

1. Comparing the proposed labor category rates with the labor rates in another contract that was competitively bid;
2. Matching rates for each labor category to an acceptable source (e.g. RS Means);
3. Verifying that the classification of each worker and skill level proposed in the contract are reasonable and necessary for the scope of work. For example, a contractor should not propose using an experienced supervisor rate or worker with professional qualifications for work that can be done by a low skilled laborer (e.g., using a professional engineer for debris monitoring). In this case, the supervisor labor classification is unreasonable and should be adjusted to the appropriate labor classification that is more commensurate with the type of work being performed; and
4. Verifying that the proposed number of labor hours are reasonable for the scope of work.

Equipment Rate Analysis

Applicants may determine the reasonableness of equipment rates by:

1. Comparing the proposed equipment rates with the equipment rates in another contract that was competitively bid (if a change order, compared rates to the original contract);
2. Comparing the proposed equipment rates to FEMA's Schedule of Equipment Rates, available at www.fema.gov;
3. Matching equipment rates for each piece of equipment to an acceptable source (e.g., EquipmentWatch);
4. Verifying that the type of equipment proposed is reasonable and necessary for the scope of work;
5. Verifying that the number of units (normally hours) of equipment usage necessary to complete the work is reasonable considering the specific scope of work; and
6. Verifying that there are no contract provisions for the following items with regard to the

proposed equipment costs:

- Mobilization costs
- Standby costs

Unit Rate Analysis

Applicants may determine the reasonableness of unit rates by:

1. Verifying that the unit of measurement (i.e. cubic yard, weight, each, etc.) is appropriate for the scope of work (if the contractor quoted a unit rate price); and
2. Comparing the proposed unit rates with similar rates in another contract that was competitively bid (if a change order, comparing rates to the original contract).

Materials and Supplies Analysis

Applicants should review the materials and supplies included in the contract proposal and ensure that all costs are reasonable.

(Scope of Work) Volume Estimates

In some circumstances, a contractor will include debris volume estimates in support of its proposed costs. Contractors develop these estimates using aerial and ground assessments, forecasting and estimating models (e.g., USACE hurricane debris models and photographs), side scan sonar and other methodologies.

Applicants should request hard copies of volume estimates and all supporting documentation in order to determine if the methodology that the contractor used to estimate debris was an acceptable and reasonable methodology. Applicants should also verify that the volume estimates are reasonable and accurate.

Price Analysis for Competitively Bid Contracts

Applicants are required by 44 CFR Part 13.36(f)(1) to perform a price analysis in all other instances (i.e., for competitively bid contracts when price competition is adequate), to determine the reasonableness of the proposed contract price. Price analyses may incorporate an evaluation of: historic documentation for similar work; average costs for similar work in the area; published unit costs from the national cost estimating databases; and FEMA cost codes, equipment rates, and engineering and design service curves. Upon request, FEMA will assist applicants in the review of these contracts and provide guidance as necessary.

FEMA RECOVERY

FACT SHEET R9580.201

ATTACHMENT 2:
Debris Operations Contract Bid Sheet

Overview

Public Assistance applicants may use the following debris operations bid sheet as a template when issuing requests for proposals and soliciting contract bids for debris removal work. Use of a standard bid sheet will help Public Assistance applicants to compare and analyze bids, resulting in a more effective procurement process. **The bid sheet serves only as a guide for soliciting requests for debris removal services; use of the bid sheet is not a requirement for Public Assistance funding.** Please refer to the *Debris Operations Contracting and Cost Analysis* (Attachment 1) for guidance on complying with procurement requirements established in 44 CFR Part 13, **Procurement**.

Debris Operations Bid Sheet

The debris operations bid sheet is presented on the next three pages. The remainder of this section is intentionally left blank.

ATTACHMENT 2:
Debris Operations Contract Bid Sheet

SAMPLE Debris Bid Sheet					
SAMPLE Category	SAMPLE Field Name and Description	SAMPLE Unit	Cost per Unit	Estimated Total Units	Total
Vegetative Collect and Haul	0-15 Miles Veg from Right of Way (ROW) to Debris Management Site (DMS) *Vegetative collect and removal for a haul distance up*	CY	999999	999999	99,999,999.00
	16-30 Miles Veg from ROW to DMS *Vegetative collect and removal for a haul distance up between 16 and 30 miles*	CY	999999	999999	99,999,999.00
	31-60 Miles Veg from ROW to DMS *Vegetative collect and removal for a haul distance between 31 and 60 miles*	CY	999999	999999	99,999,999.00
	60+ Miles Veg from ROW to DMS *Vegetative collect and removal for a haul distance greater than 60 miles*	CY	999999	999999	99,999,999.00
	Single Price Veg from ROW to DMS *A single price vegetative collect and removal for any haul distance*	CY	999999	999999	99,999,999.00
Management and Reduction	Grinding *Grinding/chipping vegetative debris*	CY	999999	999999	99,999,999.00
	Air Curtain Burning *Air Curtain Burning vegetative debris*	CY	999999	999999	99,999,999.00
	Open Burning *Open Burning vegetative debris*	CY	999999	999999	99,999,999.00
	Compacting *Compacting vegetative debris*	CY	999999	999999	99,999,999.00
	Debris Management Site Management *Preparation, management, and segregating at debris management site*	CY	999999	999999	99,999,999.00
C & D Collect and Haul	0-15 Miles C&D from ROW to DMS *C&D collect and removal for a haul distance up to 15 miles*	CY	999999	999999	99,999,999.00
	16-30 Miles C&D from ROW to DMS *C&D collect and removal for a haul distance between 16 and 30 miles*	CY	999999	999999	99,999,999.00
	31-60 Miles C&D from ROW to DMS *C&D collect and removal for a haul distance between 31 and 60 miles*	CY	999999	999999	99,999,999.00
	60+ Miles C&D from ROW to DMS *C&D collect and removal for a haul distance greater than 60 miles*	CY	999999	999999	99,999,999.00
	Single Price C&D from ROW to DMS *A single price C&D collect and removal for any haul distance*	CY	999999	999999	99,999,999.00

THIS SAMPLE BID SHEET IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. IT SHOULD NOT BE SUBMITTED TO FEMA.

ATTACHMENT 2: DEBRIS OPERATIONS CONTRACT BID SHEET

Final Disposal	0-15 Miles from DMS to Final Disposal *Transport processed debris from DMS to final disposal 0-15 Miles*	CY	999999	999999	99,999,999.00
	16-30 Miles from DMS to Final Disposal *Transport processed debris from DMS to final disposal 16-30 Miles*	CY	999999	999999	99,999,999.00
	31-60 Miles from DMS to Final Disposal *Transport processed debris from DMS to final disposal 31-60 Miles*	CY	999999	999999	99,999,999.00
	60+ Miles from DMS to Final Disposal *Transport processed debris from DMS to final disposal 60+ Miles*	CY	999999	999999	99,999,999.00
	Single Price from DMS to Final Disposal *A single price transport of processed debris from DMS to final disposal*	CY	999999	999999	99,999,999.00
	Tipping Fees (Vegetative) *Fee includes negotiated contract price or pass through amount for vegetative*	CY	999999	999999	99,999,999.00
	Tipping Fees (Mix) *Fee includes negotiated contract price or pass through amount for Mix*	CY	999999	999999	99,999,999.00
	Tipping Fees (C&D) *Fee includes negotiated contract price or pass through amount for C&D*	CY	999999	999999	99,999,999.00

Tree Operations	Hazardous Trees 6"-12" *Hazardous tree removal for a 6-12 inch trunk diameter*	Tree	999999	999999	99,999,999.00
	Hazardous Trees 13"-24" *Hazardous tree removal for a 13-24 inch trunk diameter*	Tree	999999	999999	99,999,999.00
	Hazardous Trees 25"-36" *Hazardous tree removal for a 25-36 inch trunk diameter*	Tree	999999	999999	99,999,999.00
	Hazardous Trees 37"-48" *Hazardous tree removal for a 37-48 inch trunk diameter*	Tree	999999	999999	99,999,999.00
	Hazardous Trees 49"+ *Hazardous tree removal for a 49+ inch trunk diameter*	Tree	999999	999999	99,999,999.00
	Trees with Hazardous Limbs >2" *Hazardous hanging limb removal*	Tree	999999	999999	99,999,999.00
	Hazardous Sumps >24"-36" *Hazardous stump removal for a 24-36 inch stump diameter*	Stump	999999	999999	99,999,999.00
	Hazardous Sumps >37"-48" *Hazardous stump removal 37-48 inch stump diameter*	Stump	999999	999999	99,999,999.00
	Hazardous Sumps >49"+ *Hazardous stump removal 49+ inch stump diameter*	Stump	999999	999999	99,999,999.00
	Stump Fill Dirt *Fill dirt for stump holes after removal*	CY	999999	999999	99,999,999.00

THIS SAMPLE BID SHEET IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. IT SHOULD NOT BE SUBMITTED TO FEMA.

ATTACHMENT 2: DEBRIS OPERATIONS CONTRACT BID SHEET

Specialty Removal	Waterway Debris Removal *Debris Removal from canals, rivers, creeks, streams, and ditches*	CY	999999	999999	99,999,999.00
	Sand Collection and Screening *Pick up, screen, and return debris laden sand/mud/dirt/rock*	CY	999999	999999	99,999,999.00
	Vehicle Removal *Removal of eligible vehicle*	Unit	999999	999999	99,999,999.00
	Vessel Removal (Land) *Removal of eligible vessel*	LF	999999	999999	99,999,999.00
	Vessel Removal (Marine) *Removal of eligible vessel from waterway*	LF	999999	999999	99,999,999.00
	Carcass Removal *Removal of debris that will decompose (animals and organic fleshy matter)*	Pound	999999	999999	99,999,999.00
	ROW White Goods Removal *Pick up and haul of white goods to disposal site*	Unit	999999	999999	99,999,999.00
	Freon Management *Freon management and recycling*	Unit	999999	999999	99,999,999.00
	Demolition of Private Structure	CY	999999	999999	99,999,999.00
	Electronic Waste *Removal of electronic debris that contain hazardous materials, such as cathode ray tubes. Includes computers monitors and televisions.*	Unit	999999	999999	99,999,999.00
	Silt Removal		999999	999999	99,999,999.00
	Putrescent Removal *Removal of debris that will decompose or rot (animals and organic fleshy matter)*		999999	999999	99,999,999.00
	Biowaste *Removal of waste capable of causing infection to humans (animal waste, human blood, pathological waste).*	Pound	999999	999999	99,999,999.00
	Household Hazardous Waste (HHW) *HHW removal and disposal*	Pound	999999	999999	99,999,999.00
Restoration	Beach/Lake Restoration *Berm/Beach Construction*	CY	999999	999999	99,999,999.00
	Canal Shoreline Restoration	LF	999999	999999	99,999,999.00
Monitoring	Debris Management Site Debris Monitors	Hour	999999	999999	99,999,999.00
	Debris Collection Site Debris Monitors (Field Monitors)	Hour	999999	999999	99,999,999.00
	Sr. Technician/Field Supervisor	Hour	999999	999999	99,999,999.00
	Clerical Staff	Hour	999999	999999	99,999,999.00
	Clerical Supervisor	Hour	999999	999999	99,999,999.00
				Total	9,999,999.00

THIS SAMPLE BID SHEET IS INTENDED FOR INFORMATIONAL PURPOSES ONLY. IT SHOULD NOT BE SUBMITTED TO FEMA.

Public Health & Safety Committee
Ordinance #09-245

ORDINANCE OF THE COUNTY BOARD
WILL COUNTY, ILLINOIS

Amending Will County Code of Ordinances Chapter 93 Pertaining to Nuisance Fires

WHEREAS, the Will County Board finds it in the best interest of its citizens to amend Chapter 93 of the Code of Ordinances specifically pertaining to nuisance fires, and

WHEREAS, in order to provide for the health, safety and welfare of its residents, this ordinance is being updated and amended, and

WHEREAS, public hearings were conducted on February 11, 2009 and May 14, 2009 during the Public Health & Safety Committee Meetings and during the Public Health & Safety Report at the Will County Board Meeting on June 18, 2009 to solicit public concerns and comments, and

WHEREAS, the Public Health & Safety Committee recommends the attached changes be made to Chapter 93 of the Will County Code of Ordinances pertaining to nuisance fires and recommends approval by the full County Board.

NOW, THEREFORE, BE IT ORDAINED, that the Will County Board hereby amends Chapter 93 of the Will County Code of Ordinances pertaining to nuisance fires, as attached hereto, and that these amendments become effective immediately upon adoption by the Will County Board.

BE IT FURTHER ORDAINED, that the Preamble of this Ordinance is hereby adopted as if fully set herein. This Ordinance shall be in full force and effect upon its passage and approval as provided by law.

Adopted by the Will County Board this 20th day of August, 2009.

Vote: Yes 23 *No* 1 *Pass* _____ *(SEAL)*

Nancy Schultz Voots
Will County Clerk

Approved this 25th day of August, 2009.

Lawrence M. Walsh
Will County Executive

NUISANCE FIRES

§93.015 AUTHORITY

This subchapter is enacted pursuant to authority given by 55 ILCS 5/5-1052. (Res. _____adopted _____).

§93.016 PURPOSE

The purpose of this subchapter is to define and abate public nuisances which are a detriment to the people of the county. The nuisance defined herein is detrimental to the public health, safety, and welfare. (Res. 85-179, adopted 12-19-85).

§93.017 PERMIT REQUIRED.

Waste materials of any nature shall not be disposed of by burning on the premises or in the immediate vicinity without having obtained a permit from the state or the state E.P.A. (Res. 85-179, adopted 12-19-85).

§93.018 LOCATION OF FIRES.

Fires shall be located not less than 50 feet, unless otherwise specifically provided for herein, from any neighboring structure with adequate provision made to prevent spreading of the fire

Legitimate recreation fires shall be located not less than 50 feet from any neighboring structure.

Burning in right-of-way is strictly prohibited.

Fires contained in a "patio wood-burning unit," being a chimnea, patio warmer, or other portable wood burning device used for outdoor recreation and/or heating shall be at least 15 feet from any neighboring structure. (Res. 85-17-, adopted 12-19-85, Res. 09-149 adopted 05-21-09.)

§93.0185 RECREATION FIRES

Recreation fires, being fires used to entertain or cook, may burn sticks, limbs, logs, charcoal, cooking, or camping fuel only. Recreation fires may not exceed an area dimension of six feet by six feet. In conformance with §93.017 above Waste Materials including but not limited to; garbage, trash, refuse, lumber, building materials, or tires shall not be burned in recreation fires.

§93.019 FIRES TO BE ATTENDED.

All fires shall be constantly attended by a competent person until such fire is extinguished. This person shall have a hose connected to a water supply or other fire

extinguishing equipment ready for use. This person shall be responsible for notifying the local fire department before starting the fire. (Res. 85-179, adopted 12-19-85).

§93.020 EXCEPTIONS

Section 93.017 does not apply to the burning of leaves, branches, or bushes originating on owner's property. Section 93.017 also does not apply to controlled burns for agricultural purposes, habitat reclamation, firefighter training. (Res. ___ _____adopted _____)

§93.21 NEIGHBORING STRUCTURE

Neighboring structure means any and all buildings of adjacent land owner(s), whether structured on a foundation or mobile, including but not limited to houses, garages, sheds, pole barns.

§93.022 Waste Material.

Waste Material means all substances liquid, semi-solid or solid other than, leaves, sticks, logs, branches and bushes originating on the owners property, charcoal and cooking or camping fuel.

§93.023 ENFORCEMENT.

The Sheriff's Office of the county and other applicable enforcement departments shall enforce this subchapter. (Res. _____adopted _____)

§93.999 PENALTIES.

Any person found to be in violation of any part of this subchapter shall be fined $50.00 for the first offense, $150 for the second offense and $500 for the third and subsequent offenses, plus court costs. (Res. _____adopted _____).

Policy & Rules Committee
Ordinance 08-461

ORDINANCE OF THE COUNTY BOARD
WILL COUNTY, ILLINOIS

AMENDING THE WILL COUNTY PURCHASING ORDINANCE

WHEREAS, it is necessary to amend the Will County Purchasing Ordinance, and

WHEREAS, the Policy & Rules Committee concurred and held a Public Hearing to discuss the proposed changes on October 2, 2008, and

WHEREAS, the Policy & Rules Committee recommends the attached Will County Purchasing Ordinance be adopted effective December 1, 2008, if approved by the Will County Board.

NOW, THEREFORE, BE IT ORDAINED, that the Will County Board hereby concurs with the recommendations and amends the Will County Purchasing Ordinance, as attached, effective December 1, 2008.

BE IT FURTHER ORDAINED, that all resolutions and ordinances in conflict herewith are repealed, including Resolutions #87-17, #87-142, #93-243, #00-04, #01-97,#04-250, and #08-211.

BE IT FURTHER ORDAINED, that the Preamble of this Ordinance is hereby adopted as if fully set forth herein. This Ordinance shall be in full force and effect upon its passage and approval as provided by law.

Adopted by the Will County Board this 20th day of November, 2008.

Vote: Yes 26 No 0 Pass_____ (SEAL)

Nancy Schultz Voots
Will County Clerk

Approved this 4th day of December, 2008.

Lawrence M. Walsh
Will County Executive

WILL COUNTY PURCHASING ORDINANCE

PREAMBLE

A. ADVANTAGES OF CENTRALIZED PROCUREMENT

1. Professional purchasing.
2. Control of sources of supply, and evaluation of quality, services, and price.
3. Procurement on a competitive basis.
4. Monitoring of market trends and new developments.
5. Centralized contracts between vendors and purchaser.
6. Centralized contract administration.
7. Reduction of inventories through standardization of products used by more than one department.
8. Reduction of costs through volume buying.
9. Retention of information to be used as a guide for future purchasing.
10. Avoids duplication of efforts and improve communications.

ARTICLE 1 – GENERAL PROVISIONS

PART A – PURPOSE AND APPLICATION

1-101 PURPOSE

(1) Interpretation. This Ordinance shall be construed and applied to promote its underlying purposes and policies.

(2) Purposes and Policies. The underlying purpose and policies of this ordinance:

A. To invite competition, to guard against favoritism, negligence, extravagance, fraud, and corruption, and to secure the best work or supplies at the lowest practicable price.

B. To fairly and equitably treat all persons involved in public purchasing with Will County.

C. To sustain a high level of public confidence in Will County procurement procedures.

D. To simplify, clarify, and modernize the law governing procurement by the County.

E. To permit the continued development of procurement policies and practices.

F. To maximize to the fullest extent practicable, the purchasing value of public funds in procurement.

G. To foster broad-based competition within the free enterprise system.

H. To provide safeguards for the maintenance of a procurement system of quality and integrity.

I. To provide guidelines for purchases of equipment, materials, supplies, and services for the operational requirements of Will County, so the competitive and unbiased selection of vendors is insured.

J. To support the preservation of natural resources and reduction of energy use and pollution through development of a sustainable manufacturing production systems.

K. To strengthen the markets for materials collected in local recycling collection systems.

L. To maximize the reduction of discarded materials.

M. To encourage economic development through attraction and retention of recycled and source reduction product manufacturers and distributors.

N. To support markets for recycled and other environmentally preferable products and encourage County agencies and contractors to buy such products whenever practicable.

1-102 REQUIREMENT OF GOOD FAITH

This Ordinance requires all parties involved in the negotiation, performance, or administration of County contracts to act in good faith.

1-103 SEVERABILITY

If any article, part, section, subsection, clause, or phrase of this Ordinance or application thereof to any person or circumstances is held to be unconstitutional or invalid, such unconstitutionality or invalidity shall not affect the validity of the remaining portions of the Ordinance.

1-104 SINGULAR-PLURAL AND GENDER RULES

(1) Singular-Plural. Words in the singular number include the plural, and those in the plural include the singular.

(2) Gender. Words of a particular gender include any gender and the neuter, and when the sense so indicates, words of the neuter gender may refer to any gender.

PART B – DEFINITIONS

1-201 DEFINITIONS.

The words defined in this Section shall have the meanings set forth below whenever they appear in this Ordinance or regulations promulgated there under:

(1) Architect-Engineer and Land Surveying Services. Those professional services within the scope of practice of architecture, professional engineering, structural engineering, or land surveying, as defined by the laws of the State of Illinois.

(2) Blind Trust. An independently managed trust in which the employee-beneficiary has no management rights, and in which the employee-beneficiary is not given notice of alterations, or other dispositions of, the property subjected to the trust.

(3) Competitive Bidding. Procurement process where the procedure or method to accomplish a goal or result is unknown.

(4) Finance Committee. The Committee established by the Will County Board to review and recommend appropriations and expenditure of funds for all using agencies or any successor committee having like authority.

(5) Executive Committee. The Committee established by the Will County Board to review and consider all contracts for professional services.

(6) Bid Deposit. A 10% Bid Bond or Cashiers Check made payable to the Will County Treasurer, shall accompany each bid, attached to the front cover, as a guarantee that if the bid is accepted, a contract will be entered into. **Money Orders or Company checks will NOT be accepted**. Bid Deposits will be returned to the unsuccessful bidder after the County Board awards the contract.

(7) Business. Any corporation, partnership, individual, sole proprietorship, joint stock company, joint venture, or any other private legal entity.

(8) Change Order. A change in a contract term, other than as specifically provided for in the contract, which authorizes or necessitates any increase or decrease in the cost of the contract or the time to completion.

(9) Contract Modification (bilateral change). Any written alteration in specifications, delivery point, rate of delivery, period of performance, price, quantity, or other provisions of any contract accomplished by mutual action of the parties to the contract.

(10) Confidential Information. Any information which is available to an employee only because of the employee's status as an employee of the County and is not a matter of public knowledge or available to the public on request.

(11) Construction. The process of building, altering, repairing, improving, or demolishing any public structure or building, or other public improvements of any kind to any public real property.

(12) Contract. All types of County agreements, regardless of what they may be called, for the procurement of supplies, services, or construction.

(13) Contractor. Any person having a contract with the County or using agency thereof.

(14) Cooperative Purchasing. Procurement conducted by or on behalf of more than one Public Procurement Unit.

(15) Cost Analysis. The evaluation of cost data for the purpose of arriving at costs actually incurred or estimates of costs to be incurred, prices to be paid, and costs to be reimbursed.

(16) Cost Data. Factual information concerning the cost of labor, material, overhead, and other cost elements which are expected to be incurred or which have actually been incurred by the contractor in performing the contract.

(17) County (Public) Agency. A County officer, department, official, commission, board, employee, or agency whose purchasing authority is subject to the Will County Board.

(18) County Board. The County officials elected by the voters of the County to be the Legislative Body of the County.

(19) County Executive. The County official elected by the voters of the County to be the Chief Executive Officer to administer the County Executive form of government. The term "County Executive" shall also include his designee.

(20) Department Head. An appointed County officer whose position is specifically provided for in State Statute, for example, Supervisor of Assessments, Chairman of the Board of Review, County Engineer.

(21) Direct or Indirect Participation. Involvement through decision, approval, disapproval, recommendation, preparation of any part of a purchase, request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or any other advisory capacity.

(22) Employee. An individual drawing a salary or wages from the County, whether elected or not.

(23) Environmentally preferable products and services. Commodities or services that are less detrimental to the environment or human health than competing commodities or services serving the same purpose. Includes commodities or services that minimize waste, use recycled materials, conserve energy or water, or reduce the consumption or disposal of toxic materials.

(24) Financial Interest.

a. Ownership of any interest or involvement in any relationship from which, or as a result of which, an individual within the past year has

received, or is presently or in the future entitled to receive, more than $1,200.00 per year, or its equivalent;

b. Ownership of 5% of any property of a business; or

c. Holding a position in a business such as officer, director, trustee, partner, employee, or holding any position of management.

(25) Gratuity. A payment, loan, subscription, advance, deposit of money, service, or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value is received.

(26) Immediate Family. Husband, wife, daughter, son, mother, father, mother-in-law, sister-in-law, daughter-in-law, son-in-law.

(27) Invitation for Bids. All documents, whether attached or incorporated by reference, utilized for soliciting sealed bids for the purchase or contract of any item or nonprofessional service, which estimated price equals or exceeds $20,000.00.

(28) Joint Purchase Act. The Governmental Joint Purchasing Act, 30 ILCS 525/0.01 et seq., or any successor statute.

(29) Person. Any individual or group of individuals, business, union, firm, corporation, trust, partnership, association, joint venture, committee, club, or other entity.

(30) Performance Bond. A Performance Bond may be required from the successful bidder and shall be valid throughout the term of the contract. The Performance Bond will be returned at the completion of the contract. The purpose of a Performance Bond is insurance that the successful contractor complete the job or service as outlined in the bid specifications for the price quoted and for the length of the contract. If the contractor should default on the said contract for any reason the County of Will would at that time exercise the right to use that performance bond to complete the contract.

(31) Price Analysis. The evaluation of price data, without analysis of the separate cost components and profit as in cost analysis, which may assist in arriving at prices to be paid and costs to be reimbursed.

(32) Pricing Data. Factual Information concerning prices for items substantially similar to those being procured. Prices in this definition refer to offered or proposed selling prices, historical selling prices and current selling prices. The definition refers to data relevant to both prime and subcontract prices.

(33) Procurement. The buying, purchasing, renting, leasing, or otherwise acquiring of any supplies, services, or construction. It also includes all functions that pertain to the obtaining of any supply, service, or construction, including description of requirements, selection and solicitation of sources, preparation and award of contract, and all phases of contract administration.

(34) Procurement Officer. The duly authorized agent of the County Board or County Executive for the purposes of procuring goods or services.

(35) Professional Services. The services of a person possessing a high degree of professional skill where the ability or fitness of the individual plays an important part and the primary reason for that purchase is the service provided and the skills are primarily mental as opposed to manual. Professional service means, but is not limited to, services rendered in the practice of law, accounting, engineering, medicine, architecture, dentistry, clinical psychology, and technology. For example: development of software specifically designed to meet the needs of a county office or department. The purchase of shrink-wrap software is not.

(36) Public Procurement Unit. The State of Illinois, any County, city, town, and any other subdivision of the state or public agency of any such subdivision, public authority, education, health, or other state or local entity which expends public funds for the procurement of supplies, services, and construction.

(37) Purchase Order. The written commitment for the purchase of goods and/or services with a vendor.

(38) Request for Proposals. All documents, whether attached or incorporated by reference, utilized for soliciting proposals for professional services, where the procedure or method to accomplish a goal or result is to be determined and the cost negotiated

(39) Request for Qualifications. All documents, whether attached or incorporated by reference, utilized for soliciting qualifications, for professional services.

(40) Reasonable Bidder or Offeror. A person who has the capability in all respects to perform fully the contract requirements, and the tenacity, perseverance, experience, integrity, reliability, capacity, facilities, equipment, and credit which will assure good faith performance.

(41) Recycled Products. Goods containing materials, which have been diverted from the solid waste stream including post-consumer materials,

and materials or by-products generated in industrial processes or which have been wholly or partially remanufactured.

(42) Responsible Bidder. A person who has submitted a bid which conforms in all material respects to the requirements set forth in the invitation for bids.

(43) Responsible bidder for construction contracts means a bidder who meets all of the following applicable criteria, and submits evidence of such compliance:

a. All applicable laws prerequisite to doing business in Illinois.

b. Evidence of compliance with:

i. Federal Employer Tax Identification Number of Social Security Number (for individuals).

ii. Provisions of Section 2000(e) of Chapter 21, Title 42 of the United States Code and Federal Executive Order No. 11246 as amended by Executive Order No. 11375 (known as the Equal Opportunity Employer provisions).

c. Certificates of insurance indicating the following coverages: general liability, workers' compensation, completed operations, automobile, hazardous occupation, product liability, and professional liability.

d. Compliance with all provisions of the Illinois Prevailing Wage Act, including wages, medical and hospitalization insurance and retirement for those trades as covered in the act.

e. Participation in apprenticeship and training programs approved and registered with the United States Department of Labor's Bureau of Apprenticeship and Training.

(44) Services. The furnishing of labor, time, or effort by a contractor, not involving the delivery of a specific end product and other than reports which are merely incidental to the required performance. This definition shall not apply to employment agreements, collective bargaining agreements or the definition of professional services as provided in Subsection (28) of this Section.

(45) Specification. Any description of the physical or functional characteristics or of the nature of a supply, service, or construction item. It may include a description of any requirement for inspecting, testing, or preparing a supply, service, or construction item for delivery.

(46) Standing Committee. Any committee established by the Will County Board with specific duties and responsibilities, as set forth in the Will County Board Rules.

(47) Stringing. Knowingly structuring a contract or job order to avoid the contract or job order being subject to a competitive bidding requirements.

(48) Supplies. All property, including but not limited to equipment, materials, and printing, excluding land or a permanent interest in land.

(49) Surplus. All supplies that are beyond their useful life and have no value or use to the County as determined and approved by the assigned County Board Committee.

Part C – PUBLIC ACCESS TO PROCUREMENT INFORMATION

1-301 PUBLIC ACCESS TO PROCUREMENT INFORMATION

Procurement information shall be a public record to the extent provided in the Illinois Freedom on Information Act.

ARTICLE 2 – DUTIES OF THE COUNTY EXECUTIVE

2-101 AUTHORITY AND DUTIES

(1) Authority. The County Executive shall be responsible for the procurement of supplies, services, professional services, and construction, in accordance with this Ordinance, as well as the management and disposal of supplies.

(2) Duties. In accordance with this Ordinance, and subject to the supervision of the Will County Board and the assigned County Board Committee, the County Executive shall:

a. procure or supervise the procurement of all supplies, services, and construction needed by the County;

b. develop and implement a written policy for the sale, trade, transfer, or disposal of surplus items which have become obsolete and unusable to the County, upon terms most advantageous to the

County. The policy shall be administered by the Office of the County Executive and audited by the County Auditor;

c. establish and maintain programs for specifications development, contract administration and inspection and acceptance, in cooperation with the county agencies using the supplies, services, and construction;

d. exercise general supervision over inventories of supplies belonging to the County;

e. consistent with this Ordinance, and with the approval of the assigned County Board Committee, the County Executive shall adopt purchasing regulations and operational procedures relating to the execution of his duties;

f. provide maximum service to all offices in the areas of contracts, negotiation, placement of orders, expediting delivery, and follow-up on orders in such a manner that the maximum value will be obtained per dollar expended;

g. at the request of and in cooperation with the requesting county agency, prepare and issue Invitations for Bids (IFB), Requests for Proposals (RFP), and Requests for Qualifications (RFQ), Purchase Orders and addenda or corrections thereto;

h. conduct pre-bid and pre-award conferences as necessary, cooperation with requesting county agency;

i. evaluate vendor's bids for proposals and present recommendations for award with requesting county agency or with written or recommendation for award;

j. maintain a complete record of all purchasing transactions, subject to section 2-102 (4);

k. report to the assigned County Board Committee the contracts which are expiring 90 days prior thereto and to inform the assigned County Board Committee of all contracts that are of three year's duration or more;

l. utilize all known contact and sources to expedite deliveries of needed supplies, services and equipment;

m. develop and maintain current bidders list of vendors;

n. maintain vendor and product performance records;

o. maintain, where possible, current prices through study of published price lists, information from salesmen, published market data, or through negotiations or competitive bids;

p. coordinate and control inventory systems kept in County storerooms;

q. inspect or delegate the inspection to requesting county agency of all deliveries of supplies, equipment or contractual services;

r. function as the County's representative on all matters pertaining to purchasing, in cooperation with the requesting county agency; and

s. periodically review systems and procedures to determine improved methods which result in efficiencies in performance;

2-102 APPLICABILITY.

(1) The Purchasing Ordinance is applicable to the County Board, County Executive, and all departments under the County Executive, except as specified below:

A. The following county officials have internal control over their office, and therefore, are not subject to the county competitive bidding statute or county purchasing ordinance:

(1)	Auditor	55 ILCS 5/3-1004
(2)	County Clerk	55 ILCS 5/3-2003.2
(3)	Recorder	55 ILCS 5/3-5005.2
(4)	State's Attorney	55 ILCS 5/3-9006
(5)	Treasurer	55 ILCS 5/3-10005.1

B. The Attorney General has determined that the following offices have internal control provisions over their office, and therefore, are not subject to the county competitive bidding statute or county purchasing ordinance: Supervisor of Assessments.

C. The following county offices have internal control over their offices except for purchases of equipment:

(1)	Coroner	55 ILCS 5/3-3003
(2)	Sheriff	55 ILCS 5/3-6018

D. The following offices are not subject to the county competitive bidding statute or county purchasing ordinance based upon the language of the above Attorney General opinion.

(1) Courts
(2) Public Defender
(3) Regional Superintendent Schools 1987 Ill. Attorney General Opinion 233, 87-005
(4) Clerk of the Circuit Court 1984 Ill. Attorney General Opinion 9, 84-003

E. Will County Engineer shall be required to procure services, materials and equipment for road and bridge construction, maintenance, engineering, land acquisition and such other technical supplies, services and engineering equipment necessary to meet the operational obligations of the Will County Engineer, as set forth in the Illinois Compiled Statutes.

(2) Procurement Records. All records required by Section 3-309 (County Procurement Records) shall be maintained by any county agency to which procurement authority has been delegated and a copy of all such records, as appropriate, shall be provided to the County Executive.

(3) Correspondence with Vendors. All correspondence with vendors relating to the purchasing functions shall originate from the County Executive or his designee. Correspondence concerning matters which precede actual purchasing, such as specifications development, conceptual ideas, and general industry and product application information, may be between the vendor, County Agency and the County Board Committees, provided copies of such correspondence are sent to the County Executive or his designee.

ARTICLE 3 - SOURCE SELECTION AND CONTRACT PROCEDURE

PART A – METHODS OF SOURCE SELECTION

3-101 COMPETITIVE SEALED BIDDING

(1) Conditions for Use. Excepting professional services. All contracts of the County shall be awarded by competitively sealed bidding, except as otherwise provided in Sections 3-102 (Bid Procedures), 3-103

(Competitive Sealed Proposals), 3-104 (Non-Competitive Procurement), 3-106 (Emergency Procurement), 9-102 (Sale, Acquisition, or Use of Supplies), and 9-103 (Cooperative Use of Supplies and Services), or as provided by State Statute.

(2) Invitation for Bids. All invitations for bids shall be issued and shall include specifications, and all contractual terms and conditions applicable to the procurement.

(3) Public Notice. Adequate public notice of the invitation for bids shall be given a reasonable time, but not less than twelve (12) calendar days prior to the date set forth therein for the opening of bids. Such notice shall be published in a newspaper of general circulation within the County at least twelve (12) calendar days prior to the date set forth therein for the opening of bids. The public notice shall state the place, date, and time of bid opening. All notices that are published in a newspaper shall also be published concurrently on the County web page giving notice that any and all questions may be e-mailed to the County Executive's Office together with a notice that any and all questions shall be answered by posting the answer on the appropriate County web page.

(4) Bid Opening. Bids shall be opened publicly in the presence of one or more witnesses at the time and place designated in the invitation for bids. The amount of each bid, and such other relevant information as the County Executive deems appropriate, together with the name of each bidder shall be recorded; the record and each bid shall be open to public inspection in accordance with Section 1-301 (Public Access to Procurement Information).

(5) Bid Acceptance and Bid Evaluation. Bids shall be unconditionally accepted without alteration or correction, except as authorized in this Ordinance. Bids shall be evaluated based on the requirements set forth in the invitation for bids, which may include criteria to determine acceptability such as inspection, testing, quality, workmanship, delivery, and suitability for a particular purpose. Those criteria that will affect the bid price and be considered in evaluation for award shall be objectively measurable, such as discounts, transportation costs, and total or life cycle costs. The invitation for bids shall set forth the evaluation criteria to be used. No criteria may be used in bid evaluation that is not set forth in the invitation for bids. Alternative bids may be considered and accepted provided they are specifically provided for in the invitation for bids and meet the evaluation criteria set forth therein. The evaluation criteria chosen for inclusion in a bid or proposal cannot exceed the minimum requirements necessary to meet the needs of the County. Evaluation criteria cannot be used to eliminate potential bidders or proposers.

(6) Correction or Withdrawal of Bids; Cancellation of Awards. Correction or withdrawal of inadvertently erroneous bids before or after bid opening, or cancellation of awards or contracts based on such bid mistakes, may be permitted where appropriate. Mistakes discovered before bid opening may be modified or withdrawn by written or telegraphic notice received in the office designated in the invitation for bids prior to the time set for bid opening. After bid opening, cancellation of bids shall be permitted only to the extent that the bidder can show by clear and convincing evidence that a mistake of a nonjudgmental character was made, the nature of the mistake, and the bid price actually intended. After bid opening, no changes in the bid prices or other provisions of bids prejudicial to the interest of the County in fair competition shall be permitted. In lieu of bid correction, a low bidder alleging a material mistake of fact may be permitted to withdraw its bid if:

A. the mistake is clearly evident on the face of the bid document but the intended correct bid is not similarly evident; or

B. the bidder submits evidence which clearly and convincingly demonstrates that a mistake was made.

All decisions to permit the correction or withdrawal of bids, or to cancel awards of contracts based on bid mistakes, shall be supported by a written recommendation of the assigned County Board Committee to the entity having the authority to approve.

(7) Award. The contract shall be awarded with reasonable promptness to the lowest responsible bidder whose bid meets the requirements and criteria set forth in the invitation for bids. In the event the lowest responsible bid for a construction project exceeds available funds as certified by the County Auditor, and such bid does not exceed such funds by more that ten percent (10%), the County Executive or his designee is authorized when time or economic considerations preclude resolicitation of work on a reduced scope, to negotiate with the lowest responsible bidder a reduction in only the price term of the bid, in order to bring the bid within the amount of available funds. Notwithstanding the above, the following language will be included in all solicitations: **"the County Board retains the right to reject any and all bids, and to waive non-material informality or irregularity in any bid received in whole or part., and to determine not to proceed to contract on any particular bid".**

3-102 BID PROCEDURES

Preparation of Invitation for Bid

A. Determination of Method of Procurement

The determination of the method of procurement is made by the cost or nature of that procurement as indicated below and determined by the by the designated procurement officer:

1. Purchases less than $100.00 (Purchase Order).

2. Purchases from $100.00 to $9,999.99:

   a) For the County Executive the purchase award is to be authorized by the County Executive or his duly authorized agent.

   b) For the County Board the purchase award is to be authorized by the County Board or its duly authorized agent.

   c) Bids shall not be required, but at the discretion of the County Executive or the duly authorized agent, thereof, informal quotes may be obtained.

   d) Bids, Bid Deposits or Performance Bonds are not required.

3. Purchases from $10,000 to $19,999.99:

   a) Formal bids shall not be required, but three informal quotes shall be sought.
   b) The results of the quotes shall be reported in written form as an attachment to the Auditor. The County Executive or County Board, or duly authorized agent thereof, shall select the lowest responsible quote and procure the item or services.
   c) In the event the lowest quote is not chosen then the reason shall be reported by the procurement officer in writing – as an attachment to the Auditor.
   d) Bids, Bid Deposits or Performance Bonds are not required.

4. Purchases in Excess of $20,000.00

   a) The purchase or contract of any budgeted item or nonprofessional service, with an estimated price equal to or exceeding $20,000.00, shall be submitted to the County Executive for advertising and bidding and then presented by the County Executive to the

appropriate County Board Committee as determined by the County Board Rules for presentation to and for final approval by the County Board.

b) Expenditures shall be as provided in the approved budget; or if not specifically provided in the approved budget, shall require prior approval of the assigned County Board Committee only to the extent that additional funds or appropriation is necessary.

c) Public advertisements for Sealed Bids shall be required.

d) The Bids are to be opened at a time and place designated prior to the letting of bids.

e) Bid Deposit and Performance Bonds will be required. The requirement of a bid deposit and/or performance bonds may be waived or modified prior to bid letting, including time & material costs, (on an individual case-by-case basis upon the recommendation of the Will County Executive) with the final determination of the waiver of the bid deposit requirement to be made by the assigned County Board Committee. ***Not withstanding the aforesaid, a one-time purchase of supplies shall not require a performance bond.***

f) Awards are to be made to the lowest responsible bidder complying with the terms and conditions of the invitation for bids, request for proposals, or request for quotes.

g) Notwithstanding any other provision of this Ordinance, the County Board may let without advertising for bids in the case of purchases and contracts, when individual orders do not exceed $25,000.00 for the use, purchase, delivery, movement or installation of data processing equipment, software or services and telecommunications and inter-connect equipment, software, and services.

B. General Terms and Requirements. (Required for, but not limited to, all purchases exceeding $20,000.00. The general terms and requirements will include, but are not limited to:

1. Delivery time.
2. Bid opening date and place.
3. Tax exemption statements.
4. Method of award.
5. Bond requirements

C. Bidders able to supply products containing recycled materials that

meet performance requirements are encouraged to offer them in bids and proposals.

D. Responsibility of Bidders Determination of Nonresponsibility. If a bidder or offeror who otherwise would have been awarded a contract is found not responsible, the awarding entity must make a written determination of nonresponsiblity, setting forth the basis of the finding. A copy of the determination shall be sent promptly to the nonresponsible bidder or offeror. The final determination shall be made part of the contract file.

3-103 COMPETITIVE BID AND REQUEST FOR PROCEDURES

(1) Where the procedure or method to accomplish a goal or result is unknown, as determined by the Director of Purchasing with the concurrence of the assigned County Board Committee, Competitive Sealed Proposals may be used.

(2) Requests for Proposals and/or Bids. Proposals shall be solicited through a request for proposals.

(3) Public Notice. Public notice of the request for the proposals shall be given in the same manner as provided in Section 3-101 (3) (Competitive Sealed Bidding, Public Notice).

(4) Receipt of Proposals. No proposals shall be handled so as to permit the disclosure of the identity of any bidder or the contents of any proposal to competing bidders during the process of negotiation. A bid tabulation of the proposals shall be prepared containing the name of each bidder, the number of addendums issued, if any, and a description sufficient to identify the item bid. The register of proposals shall be open for public inspection by Freedom of Information Request only after contract award. The contractor shall be notified so they can determine if there is any sensitive and/or proprietary information in their proposal that they do not want viewed.

(5) Evaluation Factors. Where appropriate, the request for proposals shall state the relative importance of evaluation factors.

(6) Award. Awards shall be made to the lowest responsible bidder taking into consideration the evaluation factors set forth in the request or addenda thereto. The contract file shall contain the basis on which the award is made.

3-104 NON-COMPETITIVE PROCUREMENT

(1) General. Contracts may be awarded without competitive bidding when the appropriate County Board Committee as determined by the County Board Rules determines in writing, after the requesting county agency has conducted and presented a good faith review of available sources, that the contract by its very nature is not suitable to competitive bids or proposals. Examples of contracts which may not be suitable to competitive bids or proposals are contracts where:

A. there is only one source for the required supply, service, or construction item;
B. a sole supplier's item is needed for trial use or testing;
C. purchases of used equipment; and
D. purchases at auctions.

(2) Negotiation. The County Executive or his designee or responsible elected official shall conduct negotiations, as appropriate, as to price, delivery, and terms.

3-105 EMERGENCY PROCUREMENTS

Notwithstanding any other provisions of this Ordinance, the County Executive, County Officers, and Department Heads, may make emergency procurement of supplies, services, or construction items when there exists a threat to public health, welfare, or safety, or to prevent or minimize serious disruption of government services; provided that each emergency procurement shall be made with such competition as is practicable under the circumstances. A written determination of the basis for the emergency and for the selection of the particular contractor shall be included in the contract file. A confirming Resolution, along with the written determination, shall be submitted to the County Board for all emergency procurements of $20,000.00 or more in accordance with Section 3-405 (Approval of Contracts).

3-106 CANCELLATION OR REJECTION OF INVITATIONS FOR BIDS OR REQUESTS FOR PROPOSALS

An invitation for bids, a request for proposals, or other solicitation may be canceled, or any or all bids or proposals may be rejected in whole or in part as may be specified in the solicitation, when it is for good cause and in the best

interests of the County. The reasons therefore shall be made part of the contract file. Each solicitation issued by the County shall state that the solicitation may be canceled and that any bid or proposal may be rejected in whole or in part for good cause when in the best interests of the County. Notice of cancellation shall be sent to all businesses solicited. The notice shall identify the solicitation, explain the reason for cancellation, and, where appropriate, explain that an opportunity will be given to compete on any resolicitation or any future procurement of similar items. Reasons for rejection shall be provided upon request by unsuccessful bidders or offerors.

PART B – BIDDER QUALIFICATIONS AND DUTIES

3-201 INSURANCE REQUIREMENTS ON SUPPLY OR SERVICE CONTRACTS

For supply contracts or service contracts, the County Executive or responsible elected official, shall determine whether insurance coverage by the contractor shall be required, and, if so, the types and amounts of coverage that shall be required. The contractor shall have the County named as an additional insured as its interest may appear and furnish the County Executive with satisfactory evidence of said insurance.

PART C – TYPES OF CONTRACTS AND CONTRACT ADMINISTRATION

3-301 TYPES OF CONTRACTS

(1) General Authority. Subject to the limitations of this Section, any type of contract which is appropriate to the procurement of and which will promote the best interests of the County may be used, provided that the use of a cost-plus-a percentage-of cost contract is prohibited, unless otherwise required by law.

(2) Multi-Term Contracts. Specified Period. Unless otherwise provided by law, a contract for supplies or services may be entered into for any specified period of time deemed to be in the best interests of the County, not to exceed 3 years, provided the term of the contract and conditions of renewal or extension, if any, are included in the solicitation and funds are available for the first fiscal period at the time of contracting. However, the total contract term for any contract *except leases, including the time periods by which the contract is extended due to renewal, shall not exceed a maximum of three (3) years. Payment and performance obligations for

succeeding fiscal periods shall be subject to the availability and appropriation of funds thereof, and copies of all contracts shall be submitted with annual budget requests.

A. Determination Prior to Use. Prior to the utilization of a multi-term contract, it shall be determined in writing:

1. that estimated requirements cover the period of the contract and are reasonably firm and continuing; and

2. that such a contract will serve the best interests of the County by encouraging effective competition or otherwise promoting economies in County procurement.

B. Cancellation Due to Unavailability of Funds. When funds are not appropriated or otherwise made available to support continuation of performance in a subsequent fiscal period, the contract shall be canceled.

(3) Multiple Source Contracting.

A. General. A multiple source award is an award of an indefinite quantity for one or more similar supplies or services to more than one bidder

B. Limitations on Use. A multiple source award may be made when award to two or more bidders for similar products is necessary for adequate economic delivery, service, or product compatibility.

Any multiple source awards shall be made in accordance with the provisions of Section 3-101 (Competitive Sealed Bidding), Section 3-102 (Bid Procedures), and Section 3-103(Competitive Sealed Proposals), Section 3-106 (Emergency Procurements), as applicable. Multiple source awards shall not be made when a single award will meet the County's needs without sacrifice of economy or service. Awards shall not be made for the purpose of dividing the business, making available product or supplier selection to allow for user preference unrelated to utility or economy, or avoiding the resolution of tie bids. Any such awards shall be limited to the least number of suppliers necessary to meet the valid requirements of the County without sacrificing economy and service.

C. Contract and Solicitation Provisions. All eligible users of the contract shall be named in the solicitation, and it shall be mandatory that the actual requirements of such users included in the contract be obtained in accordance with the contract, provided that: the County shall reserve the right to take bids separately if a particular quantity requirement arises which exceeds its normal

requirement or an amount specified in the contract; and

D. Intent to Use. If a multiple source award is anticipated prior to issuing a solicitation, the County shall reserve the right to make such an award and the criteria for award shall be stated in the solicitation.

E. Determination Required. The County Executive or his designee shall make a written determination setting forth the reasons for a multiple source award, which shall be made a part of the procurement file.

3-302 CONTRACT CLAUSES AND THEIR ADMINISTRATION

(1) Contract Clauses. All County contracts for supplies, services, and construction shall include provisions necessary to define the responsibilities and rights of the parties to the contract. The County may issue clauses appropriate for supply, service, or construction contracts, addressing among others the following subjects:

A. the unilateral right of the County to order in writing changes in the work within the scope of the contract;

B. the unilateral right of the County to order in writing temporary stopping of the work or delaying performance that does not alter the scope of the contract;

C. variations occurring between estimated quantities of work in contract and actual quantities;

D. defective pricing;

E. liquidated damages;

F. specified excuses for delay or nonperformance;

G. termination of the contract for default;

H. termination of the contract in whole or in part for the convenience of the County;

I. suspension of work on a construction project for the convenience of the County;

J. site conditions differing from those indicated in the contract, or ordinarily encountered, except that a differing site conditions clause need not be included in the contract:

1. when the contract is negotiated;
2. when the contractor provides the site or design; or
3. when the parties have otherwise agreed with respect to the risk of differing site conditions.

(2) Price Adjustments

A. Adjustments in price resulting from the use of contract clauses required by Subsection (1) of this Section shall be computed in one or more of the following ways:

1. by agreement of a fixed price adjustment before commencement of the pertinent performance or as soon thereafter as practicable;

2. by unit prices specified in the contract or subsequently agreed upon;

3. by the costs attributable to the events or situations under such clauses with adjustment of profit or fee, all as specified in the contract or subsequently agreed upon;

4. in such other manner as the contracting parties may mutually agree; or

5. in the absence of agreement by the parties, by a unilateral determination by the County of the costs attributable to the events or situations under such clauses with adjustment of profit or fee as computed by the County, as accounted for in accordance with applicable cost principles and subject to the provisions of Article 7 (Appeals and Remedies).

B. Notwithstanding the above, all adjustments in price must be in compliance with the provisions of state statute.

(3) Standard Clauses and Their Modification. The County Executive, after consultation with the State's Attorney, may establish standard contract clauses for use in County contracts.

3-303 CONTRACT ADMINISTRATION

A contract administration system designed to ensure that a contractor is performing in accordance with the solicitation under which the contract was awarded, and the terms and conditions of the contract, shall be maintained.

3-304 RIGHT TO INSPECT PLANT

The County may, at reasonable times, inspect the part of the plant, place of business, or worksite of a contractor or subcontractor at any tier which is pertinent to the performance of any contract awarded or to be awarded by the County.

(1) Contract Audit. The County shall be entitled to audit the books and records of a contractor or a subcontractor at any tier under any negotiated contract or subcontract other than a firm fixed price contract to the extent that such books, documents, papers, and records are pertinent to the performance of such contract or subcontract. Such books and records shall be maintained by the contractor or subcontractor for a period of three years from the date of final payment.

3-305 REPORTING OF ANTICOMPETITIVE PRACTICES

When for any reason collusion or other anti-competitive practices are suspected among any bidders or offerors, a notice of the relevant facts shall be transmitted to the State's Attorney.

3-306 COUNTY PROCUREMENT RECORDS

(1) Contract File. All determinations and other written records pertaining to the solicitation, award, or performance of a contract shall be maintained for the County in a contract file to be determined by the County Executive, the Auditor, and the County Clerk. The Highway Department contracts shall be maintained at the Highway Department.

(2) Retention of Procurement Records. All procurement records shall be retained and disposed of by the County in accordance with records retention guidelines and schedules approved by the State of Illinois Local Records Commission.

3-307 APPROVAL OF ACCOUNTING SYSTEM

Except with respect to firm price contracts, no contract type shall be used unless

it has been determined in writing by the County Executive that:

(1) the proposed contractor's accounting system will permit timely development of all necessary cost data in the form required by the specific contract type contemplated; and

(2) the proposed contractor's accounting system is adequate to allocate costs in accordance with generally accepted cost accounting principles.

PART D – CONTRACT EXECUTION

3-401 REQUISITIONS

Prior to submission to the County Executive, all requisitions shall be signed by the county agency making the request or by any individual authorized by the County Officer.

3-402 FISCAL RESPONSIBILITY

Prior to the payment of any purchase order, contract, change order or contract modification, the Auditor shall verify that sufficient budgeted funds are available.

3-403 AUTHORIZATION TO ISSUE BIDS OR OTHER SOLICITATIONS

The County Executive may issue bids or other solicitations for any supply, service, or construction item for which funds have been specifically budgeted.

3-404 REVIEW OF CONTRACTS

The County Executive may request the State's Attorney to review all contracts prior to award of the contract.

3-405 APPROVAL OF CONTRACTS

(1) Contracts of $20,000.00 or more. Contracts for $20,000.00 or more shall be submitted by the responsible county official to the County Board for approval. After award by the County Board, contracts shall be signed by the County Executive.

(2) Contracts of less than $20,000.00. Subject to the provisions of Section 3-102 the County Officer or Department Head, upon approval by the County Executive, shall sign all contracts of less than $20,000.00 for all purchases when the funds are available within their budget.

(3) Contracts by Other County Officials. When authority to purchase certain supplies, services, or construction items has been delegated pursuant to Section 2-102 (Delegation to Other County Officials), then the delegated official shall sign the contract instead of the County Executive.

(4) Upon execution, the Auditor will be provided with one copy of the executed contract for his retention.

3-406 CHANGE ORDERS AND CONTRACT MODIFICATIONS

(1) Change orders, contract modifications or price adjustments, as defined in Section 1-201 or by state statute, are subject to approval of the assigned County Board committee in the following circumstances:

A. When the total of change orders, contract modifications, or price adjustments of any contract of $20,000.00 or more exceeds ten percent (10%) of the original contract amount, or a change in the time of completion is 30 days or more; or

B. When the total of change orders, contract modifications, or price adjustments of any contract exceeds $20,000.00

(2) Change orders, contract modifications or price adjustments of contracts under Section 3-407(1)(A) or (B) maybe approved by the appropriate County Board Committee as determined by the County Board rules when the County Official or employee determines in writing that:

A. the circumstances said to necessitate the change in performance were not reasonably foreseeable at the time the contract was signed, or

B. the change is germane to the original contract, as signed, or

C. the change order is in the best interest of the County and is authorized by law.

(3) The written change orders shall be preserved in the contract file.

(4) Contracts under the jurisdiction of the County Engineer are not subject to this provision.

3-407 MAXIMUM PRACTICABLE COMPETITION

All specifications shall be drafted so as to promote overall economy for the purpose intended and encourage competition in satisfying the County's needs, and shall not be unduly restrictive. The policy enunciated in this Section applies to all specifications including, but not limited to, those prepared for the County by architects, engineers, designers, and draftsmen.

3-408 ADDITIONAL CONTENTS OF BID PACKAGES

In addition to the bid specifications detailing information as to the specific services, materials, equipment, or supplies sought, the bid package must include the following:

(1) pursuant to 720 ILCS 5/33E-11, the prime contractor bid certification form attesting that the prime contractor is not barred from entering the contract;

(2) a copy of Article 33E of Illinois Criminal Code of 1961, together with a form to be signed by the bidder that the bidder has not violated any of the provisions of said Article; and

(3) the phone number of the State's Attorney's Office to call concerning any possible violation of Article 33 of the Illinois Criminal Code for 1961.

(4) Where applicable, prevailing wage act requirements will be specified.

PART B – BID SECURITY, PERFORMANCE BONDS, AND INSURANCE REQUIREMENTS FOR CONSTRUCTION CONTRACTS

201 BID SECURITY

(1) Requirement for Bid Security. Bid Security shall be required for all competitive sealed bidding for construction contracts when the price is estimated by the County Executive to exceed $25,000.00. Bid Security shall be a bond provided by a surety company authorized to do business in the State of Illinois, or the equivalent in cash, or otherwise supplied in a form satisfactory to the County. Nothing herein shall prevent the requirement of such bonds on construction contracts under $25,000.00

when the circumstances warrant.

(2) Amount of Bid Security. Bid Security shall be in an amount equal to at least ten percent (10%) of the amount of the bid.

202 CONTRACT PERFORMANCE OR PAYMENT BONDS

(1) When Required - Amounts. When a construction contract is awarded in excess of $25,000.00, the following bonds or security shall be delivered to the County and shall become binding on the parties upon the execution of the contract:

A. a performance bond satisfactory to the County, executed by a surety company authorized to do business in the State, or otherwise secured in a manner satisfactory to the County, in an amount equal to one-hundred percent (100%) of the price specified in the contract; and

B. a payment bond satisfactory to the County, executed by a surety company authorized to do business in the State or otherwise secured in a manner satisfactory to the County, for the protection of all persons supplying labor or materials to the contractor or its subcontractors for the performance of the work provided in the contract. The bond shall be in an amount equal to one hundred percent (100%) of the price specified in the contract.

(2) Authority to Require Additional Bonds. Nothing in this Section shall be construed to limit the authority of the County to require a performance bond or other security in addition to those bonds, or in circumstances other than specified in Subsection (1) of this Section.

ARTICLE 4 - SUPPLY MANAGEMENT

4-101 SUPPLY MANAGEMENT REGULATIONS

Pursuant to Section 2-101(3) (Purchasing Regulation and Operational Procedures), the County Executive shall be responsible for developing policy for:

(1) the management of supplies during their entire life cycle;

(2) the sale, lease, or disposal of surplus supplies by public auction, competitive sealed bidding, or other appropriate method designated by

regulation; and

(3) transfer of excess property.

4-102 ALLOCATION OF THE PROCEEDS FROM SALE OR DISPOSAL OF SURPLUS SUPPLIES

Proceeds from the sale or disposal of surplus supplies or equipment shall be disposed into the County Corporate Fund, unless State or Federal Law requires or mandates otherwise.

ARTICLE 5 - APPEALS AND REMEDIES

5-101 BID PROTESTS

(1) Right to Protest. Any actual or prospective bidder, offeror, or contractor who is aggrieved in connection with the solicitation or award of a contract may protest to the County Executive. Any protest must be submitted in writing within ten (10) calendar days from the issuance of the solicitation, addendum, notice of award or other decision by the County Executive, County Board, or awarding official.

(2) Stay of Procurement during Protest. In the event of a timely protest under Subsection (1) of this Section, the County Executive or the assigned County Board Committee, after consulting with the State's Attorney, shall determine whether it is in the best interests of the County to proceed with the solicitation or award of the contract.

(3) Entitlement to Costs. When a protest is sustained and the protesting bidder or offeror should have been awarded the contract under the solicitation but is not, then the protesting bidder or offeror shall be entitled only to the reasonable costs incurred in connection with the solicitation, including bid preparation costs other than attorney's fees.

5-102 CONTRACT CLAIMS

All claims by a contractor against the County relating to a contract, except bid protests, shall be submitted in writing to the County Executive. The contractor may request a conference with the County Executive on the claim. Claims include without limitation, disputes arising under a contract, and those based

upon modification or rescission.

5-103 AUTHORITY OF THE COUNTY EXECUTIVE TO SETTLE BID PROTEST AND CONTRACT CLAIMS, SUBJECT TO STATUTORY PROVISIONS

(1) Authority. The Awarding Entity is authorized to settle any procedural protest regarding the solicitation or award of a County contract prior to an appeal to the Will County Board, or any committee thereof. The County Executive, after consulting with the State's Attorney, is authorized to make recommendations on the settlement of any monetary claim to the assigned County Board Committee of the Will County Board for their consideration.

(2) Notice to the Contractor of the County Executive's or Awarding Entity's Decision. If a protest or claim is not resolved by mutual agreement, the County Executive or Awarding Entity shall promptly issue a decision in writing, and it shall be immediately mailed or otherwise furnished to the contractor. The decision shall state the reasons for the decision reached, and shall inform the contractor of its appeal rights under Subsection (3) of this Section.

(3) Failure to Render Timely Decision. If a written decision is not rendered regarding any protest or claim within ten (10) calendar days after written request for a final decision, or within such longer period as may be agreed upon between the parties, then the aggrieved party may proceed with an appeal to the County Board as if an adverse decision had been received.

5-104 REMEDIES FOR SOLICITATION OR AWARD IN VIOLATION OF LAW

(1) Prior to Bid Opening or Closing Date for Receipt of Proposals. If prior to the bid opening or the closing date for receipt of proposals, the County Executive, after consultation with the State's Attorney, determines that the solicitation is in violation of federal, state, or local law, then the solicitation shall be canceled or revised to comply with applicable law.

(2) Prior to Award. If after bid opening or closing date for receipt of proposals, the County Executive, after consultation with the State's Attorney, determines that a solicitation or a proposed award of a contract is in violation of federal, state, or local law, then the solicitation or proposed

award shall be canceled.

(3) After Award. If, after award, the County Executive, after consultation with the State's Attorney, determines that a solicitation or award of a contract was in violation of applicable law, then the matter shall be considered at the next County Board meeting.

ARTICLE 6 - COOPERATIVE PURCHASING

6-101 COOPERATIVE PURCHASING AUTHORIZED

Subject to applicable state statutes, the County of Will may either participate in, sponsor, conduct, or administer a cooperative purchasing agreement for the procurement of supplies, services, or construction with one or more public procurement units in accordance with an agreement entered into between the participants. Such cooperative purchasing may include, but is not limited to, joint or multi-party contracts between public procurement units and open-ended state public procurement unit contracts which are made available to other public procurement units. The Elected Officials must follow rules of the state statute if not following the purchasing ordinance.

6-102 SALE, ACQUISITION, OR USE OF SUPPLIES

The County of Will may sell, acquire from, or use any supplies belonging to another public procurement unit independent of the requirements of Article 3 (Source Selection and Contract Procedure).

6-103 COOPERATIVE USE OF SUPPLIES AND SERVICES

The County of Will may enter into an agreement independent of the requirements of Article 3 (Source Selection and Contract Formation) with any other public Procurement unit for the cooperative use of supplies or services under the terms agreed upon between the parties.

6-104 JOINT USE OF FACILITIES

The County of Will may enter into agreements for the common use or lease of warehouse facilities, capital equipment, and other facilities with another public procurement unit under the terms agreed upon between the parties.

ARTICLE 7 - ETHICS IN PUBLIC CONTRACTING

7-101 STATEMENT OF POLICY

Public employment is a public trust. It is the policy of the County to promote and balance the objective of protecting government integrity and the objective of facilitating the recruitment and retention of personnel needed by the County. Such policy is implemented by prescribing essential standards of ethical conduct without creating unnecessary obstacles to entering public service. Public employees must discharge their duties impartially so as to assure fair competitive access to governmental procurement by responsible contractors. Moreover, they should conduct themselves in such a manner as to foster public confidence in the integrity of the County procurement organization. To achieve the purpose of this Article, it is essential that those doing business with the County also observe the ethical standard prescribed herein.

7-102 GENERAL STANDARDS OF ETHICAL CONDUCT

(1) General Ethical Standard for Employees. Any attempt to realize personal gain through public employment by conduct inconsistent with the proper discharge of the employee's duties is a breach of the public trust.

(2) General Ethical Standards for Non-Employees. Any effort to influence any public employee to breach the standards of ethical conduct set forth in this Article is a breach of ethical standards.

7-103 CRIMINAL PENALTIES

To the extent that violations of the ethical standards of conduct set forth in this Article constitute violation of State Statutes, they shall be punishable as provided therein. Such penalties shall be in addition to the civil sanctions set forth in this Article. Criminal, civil, and administrative sanctions against employees or non-employees which are in existence on the effective date of this Ordinance shall not be impaired.

7-104 EMPLOYEE CONFLICT OF INTEREST

(1) Conflict of Interest. It shall be unethical for any County employee to participate directly of indirectly in a procurement contract when the County employee knows that:

A. the County employee or any member of the County employee's immediate family has a financial interest pertaining to the procurement contract; or

B. any other person, business, or organization with whom the County employee or any member of a County employee's immediate family is negotiating or has an agreement concerning prospective employment is involved in the procurement contract.

(2) Financial Interest in a Blind Trust. A County employee or any member of a County employee's immediate family who holds a financial interest in a disclosed blind trust shall not be deemed to have a conflict of interest with regard to matters pertaining to that financial interest.

(3) Discovery of Actual or Potential Conflict of Interest, Disqualification, and Waiver. Upon discovery of an actual or potential conflict of interest, an employee shall promptly file a written statement of disqualification and shall withdraw from further participation in the transaction involved. The employee may, at the same time, apply for an advisory opinion as to what further participation, if any, the employee may have in the transaction pursuant to Section 9-108 (Waivers from Contemporaneous Employment Prohibited).

7-105 GRATUITIES AND KICKBACKS

(1) Gratuities. It shall be unethical for any person to offer, give, or agree to give any County employee, or for any County employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any direct or indirect participation in a County bid, proposal, or purchase.

(2) Kickbacks. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any individual associated therewith, as in inducement for the award of a subcontract or order.

7-106 PROHIBITION AGAINST CONTINGENT FEES

It shall be unethical for a person to be retained, or to retain a person, to solicit or secure a County contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee.

7-107 CONTEMPORANEOUS EMPLOYMENT PROHIBITED

It shall be unethical for any County employee who is participating directly or indirectly in the procurement process to become or to be, while such a County employee, the employee of a person contracting with the County.

7-108 WAIVERS FROM CONTEMPORANEOUS EMPLOYMENT

The assigned County Board Committee may grant a waiver from the employee conflict of interest provision (Section 9-104; Employee Conflict of Interest) or the contemporaneous employment provision (Section 9-107; Contemporaneous Employment Prohibited) upon making a written determination that:

(1) the contemporaneous employment or financial interest of the County employee has been publicly disclosed;

(2) the County Employee will be able to perform its procurement functions without actual or apparent bias or favoritism; and

(3) the award will be in the best interest of the County.

7-109 USE OF CONFIDENTIAL INFORMATION

It shall be unethical for any employee or former employee to knowingly use confidential information for actual or anticipated personal gain, or for the actual or anticipated personal gain of any other person.

7-110 SANCTIONS

(1) Employees. Sanctions on a County employee for violations of the ethical standards of this Article shall be imposed in accordance with Will County Ethics Ordinances.

(2) Non-Employees. The assigned County Board Committee may impose one or more of the following sanctions on a non-employee for violations of the ethical standards:

A. written warning or reprimands;
B. termination of contracts.

7-111 RECOVERY OF VALUE TRANSFERRED OR RECEIVED IN BREACH OF ETHICAL STANDARDS

(1) General Provisions. The value of anything transferred or received in breach of the ethical standards of this Ordinance by a County employee or non-employee may be recovered from both the County employee and the non-employee.

(2) Recovery of Kickbacks by the County. Upon showing that a subcontractor made a kickback to a prime contractor or a higher tier subcontractor in connection with the award of a subcontract or an order thereunder, it shall be conclusively presumed that the amount thereof was included in the price of the subcontract or order and ultimately borne by the County and will be recoverable hereunder from the recipient. In addition, the amount may also be recovered from the subcontractor making such kickbacks. Recovery from one offending party shall not preclude recovery from other offending parties.

Will County Building and Planning
Contractor Listing

Sort: Alpha-Company Type: ALL Trades: Demolition Range: A - Z

Alex Trucking Inc
319 Lintz Street
Lemont, IL 60439

Alex Wontorczyk
630/257-0816 **Registration:**
Classification: General/Trades

Trades: Excavating, Demolition, General Contractor, Carpentry, Drywall, Insulation

Registration Application	Registration	Liability	Workmans Comp	Bond
12/23/2015	12/31/2016	01/05/2017	01/01/2017	04/15/2016

American Backhoe Service
2560 Federal Signal Drive
University Park, IL 60484

Carl Sterzel
815/469-2100 **Registration:**
Classification: General/Trades

Trades: Excavating, Carpentry, Concrete, Damp/Water Proofing, Demolition, Drywall, Electric=04/30/2015, General Contractor, Pole Erection, Siding

Registration Application	Registration	Liability	Workmans Comp	Bond
01/15/2016	12/31/2016	08/29/2016	08/29/2016	11/18/2016

American Demolition Corp.
305 Ramona Ave
Elgin, IL 60120

Linda Norwick
847/608-0010 **Registration:**
Classification: Sub

Trades: Demolition, Excavating

Registration Application	Registration	Liability	Workmans Comp	Bond
01/27/2016	12/31/2016	11/20/2016	11/21/2016	09/13/2016

American Steel Carports, Inc.
457 N. Broadway Street
Joshua, TX 76058

Primo Costillo
866/730-9865 **Registration:**
Classification: General/Trades

Trades: Demolition, Excavating, General Contractor, Steel Erector, Carpentry, Concrete

Registration Application	Registration	Liability	Workmans Comp	Bond
01/26/2016	12/31/2016	05/31/2016	05/31/2016	08/15/2016

American Technologies, Inc.
1150 Shore Road
Naperville, IL 60563

Gary Moore
630/548-8150 **Registration:**
Classification: General/Trades

Trades: Carpentry, Concrete, Demolition, Drywall, General Contractor, HVAC, Insulation, Masonry, Siding

Registration Application	Registration	Liability	Workmans Comp	Bond
01/12/2016	12/31/2016	08/01/2016	08/01/2016	08/22/2016

Anderson & Anderson Construction & Consulting
670 N. Madison St., Unit A
Crown Point, IN 46307

Newel Anderson
219/743-4341 **Registration:**
Classification: General/Trades

Trades: Carpentry, Demolition, Excavating, General Contractor

Registration Application	Registration	Liability	Workmans Comp	Bond
02/08/2016	12/31/2016	06/25/2016	06/25/2016	01/01/2017

Andy Kay dba Kay Consulting
1115 E. Illinois St.
Wheaton, IL 60187

Andrew Kay
630/742-2546 **Registration:**
Classification: General/Trades

Trades: Carpentry, Demolition, Drywall, General Contractor, Gutters, Fascia & Soffit, Insulation, Windows/Doors

Registration Application	Registration	Liability	Workmans Comp	Bond
12/15/2015	12/31/2016	05/21/2016	05/21/2016	12/04/2016

ANYTIME ROOF REPAIR, INC.
635 E BROADWAY AVENUE
BRADLEY, IL 60915

Charles Morris
815/954-4436 **Registration:**
Classification: General/Trades

Trades: Roofing=12/31/2017, Siding, General Contractor, Carpentry, Concrete, Damp/Water Proofing, Demolition, Drywall, Excavating, Gutters, Fascia & Soffit, Pole Erection, Steel Erector, Ty Downs,

Registration Application	Registration	Liability	Workmans Comp	Bond
01/15/2016	12/31/2016	05/07/2016	12/20/2016	01/15/2017

Will County Building and Planning
Contractor Listing

Sort: Alpha-Company Type: ALL Trades: Demolition Range: A - Z

Better Built Lumber & Supply Inc.
17350 S. Cicero Ave.
Country Club Hills, IL 60478

Anna George
708/799-9393 **Registration:**
Classification: General/Trades

Trades: Carpentry, Concrete, Damp Proofing, Excavating, General Contractor, Roofing=12/31/2017, Siding, Demolition

Registration Application	Registration	Liability	Workmans Comp	Bond
01/06/2016	12/31/2016	08/21/2016	08/21/2016	08/18/2016

BMWC Constructors
420 Superior Avenue
Munster, IN 46321

Robert Robinson
219/922-5000 **Registration:**
Classification: General/Trades

Trades: Carpentry, General Contractor, Steel Erector, Concrete, Excavating, Demolition, Mechanical Piping

Registration Application	Registration	Liability	Workmans Comp	Bond
12/18/2015	12/31/2016	06/01/2016	06/01/2016	01/01/2017

Brandenburg Industrial Service
2625 S. Loomis Street
Chicago, IL 60608

Thomas Little
312/528-1168 **Registration:**
Classification: General/Trades

Trades: General Contractor, Demolition, Excavating

Registration Application	Registration	Liability	Workmans Comp	Bond
12/21/2015	12/31/2016	11/01/2016	11/01/2016	12/12/2016

Brieser Construction Co.
24101 S. Municipal Dr.
Channahon, IL 60410

Brent Southall
815/521-0900 **Registration:**
Classification: General/Trades

Trades: Carpentry, Concrete, Drywall, Excavating, General Contractor, Siding, Insulation, Demolition, Steel Erector

Registration Application	Registration	Liability	Workmans Comp	Bond
12/14/2015	12/31/2016	07/01/2016	07/01/2016	05/08/2016

Carlson Brothers Inc
17250 New Lenox Road
Joliet, IL 60432

Mark Carlson
815/531-3400 **Registration:**
Classification: General/Trades

Trades: Carpentry, General Contractor, Steel Erector, Insulation, Damp/Water Proofing, Siding, Concrete, Drywall, Excavating, Demolition, Masonry

Registration Application	Registration	Liability	Workmans Comp	Bond
02/05/2016	12/31/2016	01/12/2017	01/12/2017	12/18/2016

Christopher Michael Builders
23323 W. Lake Pl.
Plainfield, IL 60544

Chris Eurkaitis
630/880-9091 **Registration:**
Classification: General/Trades

Trades: Carpentry, Concrete, Damp/Water Proofing, Demolition, Drywall, General Contractor, Insulation, Masonry, Siding, Windows/Doors

Registration Application	Registration	Liability	Workmans Comp	Bond
12/01/2015	12/31/2016	03/12/2016	Waived	11/18/2016

CJ Pohrte Maintenance Inc.
1961 W. 34th Steger Rd.
Steger, IL 60475

Joel Pohrte
708/481-4818 **Registration:**
Classification: General/Trades

Trades: Carpentry, General Contractor, Drywall, Demolition

Registration Application	Registration	Liability	Workmans Comp	Bond
12/14/2015	12/31/2016	12/24/2016	12/24/2016	12/11/2016

Clune Construction Company, LP
10 S. Riverside Plaza, Suite 2200
Chicago, IL 60606

R. David Hall
312/609-3624 **Registration:**
Classification: General/Trades

Trades: Carpentry, Demolition, Drywall, General Contractor, Windows/Doors

Registration Application	Registration	Liability	Workmans Comp	Bond
01/26/2016	12/31/2016	09/01/2016	09/01/2016	04/10/2016

Will County Building and Planning
Contractor Listing

Sort: Alpha-Company Type: ALL Trades: Demolition Range: A - Z

D Construction
1488 S. Broadway
Coal City, IL 60416

Tamara Hansen
815/634-2555 **Registration:**
Classification: General/Trades

Trades: Carpentry, Concrete, General Contractor, Demolition, Excavating, Steel Erector, Damp Proofing, Insulation, Masonry, Mechanical Piping, Modular Home, Siding, Sign, Ty Downs

Registration Application	Registration	Liability	Workmans Comp	Bond
01/07/2016	12/31/2016	04/05/2016	04/05/2016	03/19/2016

Danley Lumber Co. / Danley Garage World
612 Academy Drive
North Brook, IL 60062-2421

Jeff Fisher
847/562-9390 **Registration:**
Classification: General/Trades

Trades: General Contractor, Roofing=12/31/2017, Siding, Excavating, Carpentry, Demolition, Concrete

Registration Application	Registration	Liability	Workmans Comp	Bond
01/25/2016	12/31/2016	12/31/2016	12/31/2016	04/16/2016

Donegal Excavating Inc
P O Box 669
Lemont, IL 60439

Simon Bradley
815/838-9801 **Registration:**
Classification: Sub

Trades: Excavating, Demolition

Registration Application	Registration	Liability	Workmans Comp	Bond
01/11/2016	12/31/2016	12/10/2016	12/10/2016	07/09/2016

Electric Conduit Construction Co.
816 Hicks Dr.
Elburn, IL 60119

James Pfleeger
630/293-5272 **Registration:**
Classification: General/Trades

Trades: Excavating, Electric=12/31/2016, Cell Tower Erector, General Contractor, Demolition

Registration Application	Registration	Liability	Workmans Comp	Bond
01/05/2016	12/31/2016	05/31/2016	05/31/2016	03/09/2016

Grosshening Inc.
P.O. Box 787 880 S Material Rd, Romeoville 60446
New Lenox, IL 60451

Greg Kulbartz
815/838-0230 **Registration:**
Classification: Sub

Trades: Demolition, Excavating

Registration Application	Registration	Liability	Workmans Comp	Bond
02/01/2016	12/31/2016	06/26/2016	03/16/2016	02/01/2017

Hayes Mechanical
5959 S. Harlem Avenue
Chicago, IL 60638

Paul Snyder
773/784-0000 **Registration:**
Classification: General/Trades

Trades: HVAC, Carpentry, Concrete, Demolition, Excavating, Fire Sprinklers, General Contractor, Mechanical Piping, Plumbing=09/30/2016, Steel Erector

Registration Application	Registration	Liability	Workmans Comp	Bond
01/06/2016	12/31/2016	09/30/2016	09/30/2016	11/29/2016

Imperial Roofing
1132 Collins Street
Joliet, IL 60432

Ayfa (Jorge) Franchini
815/722-7400 **Registration:**
Classification: General/Trades

Trades: Roofing=12/31/2017, Siding, Carpentry, General Contractor, Drywall, Insulation, Demolition, Excavating

Registration Application	Registration	Liability	Workmans Comp	Bond
12/15/2015	12/31/2016	05/19/2016	06/04/2016	05/27/2016

J & L Construction & Development Inc.
3449 S Lituanica Avenue
Chicago, IL 60608

Linas Zeimys
773/719-6644 **Registration:**
Classification: General/Trades

Trades: Carpentry, Demolition, Drywall, Insulation, Windows/Doors, General Contractor

Registration Application	Registration	Liability	Workmans Comp	Bond
12/28/2015	12/31/2016	05/01/2016	05/19/2016	12/28/2016

Will County Building and Planning
Contractor Listing

Sort: Alpha-Company Type: ALL Trades: Demolition Range: A - Z

Kimber Const. Inc.
509 E. Illinois Hwy.
New Lenox, IL 60451
Trades: Excavating, Demolition

Kenneth Klauzek
815/485-6755 **Registration:**
Classification: Sub

Registration Application	Registration	Liability	Workmans Comp	Bond
12/28/2015	12/31/2016	08/01/2016	08/01/2016	04/01/2016

KOT BUILDERS INC
210 MUEHL DR
LOCKPORT, IL 60441
Trades: Carpentry, Demolition, Drywall, General Contractor, Insulation, Siding, Windows/Doors

BOB KOT
708/243-5246 **Registration:**
Classification: General/Trades

Registration Application	Registration	Liability	Workmans Comp	Bond
12/01/2015	12/31/2016	05/15/2016	Waived	11/30/2016

Lindblad Construction Co. of Joliet
717 East Cass St.
Joliet, IL 60432
Trades: Carpentry, Concrete, Drywall, General Contractor, Masonry, Excavating, Demolition, Insulation

Mark Stadalsky
815/726-6251 **Registration:**
Classification: General/Trades

Registration Application	Registration	Liability	Workmans Comp	Bond
12/31/2015	12/31/2016	04/01/2016	04/01/2016	11/12/2016

M. VALENCIA CONSTRUCTION INC
4122 W 58TH ST
CHICAGO, IL 60629
Trades: Carpentry, Demolition, Drywall, General Contractor, Insulation, Siding, Windows/Doors

MARIO VALENCIA
773/209-8768 **Registration:**
Classification: General/Trades

Registration Application	Registration	Liability	Workmans Comp	Bond
12/01/2015	12/31/2016	04/14/2016	Waived	10/22/2016

MADDIG CONSTRUCTION INC
28515 S PARK RD
BEECHER, IL 60401
Trades: Excavating, Demolition

630/667-7212 **Registration:**
Classification: Sub

Registration Application	Registration	Liability	Workmans Comp	Bond
01/07/2016	12/31/2016	06/17/2016	Waived	08/27/2016

Mark Spizzirri Tile
11584 Tea Tree Lane
Frankfort, IL 60423
Trades: Carpentry, Demolition, Drywall, General Contractor, Windows/Doors

Mark Spizzirri
708/906-9764 **Registration:**
Classification: General/Trades

Registration Application	Registration	Liability	Workmans Comp	Bond
12/11/2015	12/31/2016	07/29/2016	10/08/2016	12/10/2016

McBroom Home Services
1102 Millard Ct.
Joliet, IL 60431-4194
Trades: Carpentry, Demolition, Drywall, General Contractor, Insulation, HVAC

Robert McBroom
815/603-0905 **Registration:**
Classification: General/Trades

Registration Application	Registration	Liability	Workmans Comp	Bond
01/07/2016	12/31/2016	09/05/2016	09/05/2016	04/23/2016

Northwest Cedar Products
15537 S Weber Road
Romeoville, IL 60446
Trades: Carpentry, Demolition, General Contractor, Concrete, Drywall, Insulation, Siding, Windows/Doors, Excavating

John Keefe
815/836-8731 **Registration:**
Classification: General/Trades

Registration Application	Registration	Liability	Workmans Comp	Bond
02/02/2016	12/31/2016	09/23/2016	03/06/2016	02/01/2017

Will County Building and Planning
Contractor Listing

Sort: Alpha-Company Type: ALL Trades: Demolition Range: A - Z

Omnicon Inc
2207 Muriel Court
Joliet, IL 60433

Mark Miller
815/722-5796 **Registration:**
Classification: General/Trades

Trades: Carpentry, Drywall, General Contractor, Insulation, Siding, Concrete, Demolition, Excavating

Registration Application	Registration	Liability	Workmans Comp	Bond
12/07/2015	12/31/2016	01/26/2017	08/12/2016	01/22/2017

Pullara, Inc.
812 Rail Way Ct.
Minooka, IL 60447

Steve Pullara
815/521-9227 **Registration:**
Classification: General/Trades

Trades: Carpentry, Concrete, Damp Proofing, Drywall, Excavating, General Contractor, Siding, Insulation, Masonry, Demolition

Registration Application	Registration	Liability	Workmans Comp	Bond
02/02/2016	12/31/2016	05/30/2016	05/30/2016	02/01/2017

Riedy Construction, Inc.
10125 S. Mandel Street
Plainfield, IL 60585

Roseanne Markowski
630/961-3876 **Registration:**
Classification: General/Trades

Trades: Carpentry, Demolition, Drywall, Electric=06/30/2016, General Contractor, Masonry

Registration Application	Registration	Liability	Workmans Comp	Bond
01/22/2016	12/31/2016	10/05/2016	10/15/2016	01/21/2017

ROBERTS PIPELINE INC
2051 W US HWY 36
MIDDLETOWN, IN 47356

GARY L ROBERTS
765/533-4728 **Registration:**
Classification: General/Trades

Trades: Demolition, Excavating, General Contractor, Mechanical Piping

Registration Application	Registration	Liability	Workmans Comp	Bond
12/21/2015	12/31/2016	05/01/2016	05/01/2016	12/31/2016

Steele & Loeber Lumber Co.
801 Mannheim Road
Bellwood, IL 60104-2073

708/544-8383 **Registration:**
Classification: General/Trades

Trades: General Contractor, Roofing=12/31/2017, Carpentry, Demolition, Excavating, Siding, Windows/Doors

Registration Application	Registration	Liability	Workmans Comp	Bond
12/03/2015	12/31/2016	08/15/2016	03/01/2016	12/01/2016

Tri-State Disposal, Inc.
13903 S. Ashland Avenue
Riverdale, IL 60827

Sheryl Germany
708/388-9910 **Registration:**
Classification: Sub

Trades: Demolition, Excavating

Registration Application	Registration	Liability	Workmans Comp	Bond
02/08/2016	12/31/2016	11/27/2016	07/25/2016	12/09/2016

UNLIMITED FIRE RESTORATION
5104 WALNUT AVENUE
DOWNERS GROVE, IL 60515

Robert Boldyrew
630/966-8545 **Registration:**
Classification: General/Trades

Trades: Carpentry, Drywall, General Contractor, Insulation, Siding, Roofing=12/31/2017, HVAC, Demolition, Gutters, Fascia & Soffit

Registration Application	Registration	Liability	Workmans Comp	Bond
01/11/2016	12/31/2016	11/06/2016	09/10/2016	08/26/2016

By-Laws Of
The Illinois Public Works Mutual Aid Network, Inc.

An Illinois Not-for-Profit Corporation

Article One
Name, Principal Office, Purpose and Powers, Registered Agent and Corporate Seal

1.1 Name. The name of the Corporation is **The Illinois Public Works Mutual Aid Network, Inc. (IPWMAN)** ("the Corporation").

1.2 Location. The location of the principal office of the Corporation shall be in the City of Urbana, in the County of Champaign and State of Illinois. In addition, the Corporation may maintain other offices and facilities either within or without the State of Illinois as determined by the Board of Directors from time to time. The Board of Directors may from time to time change the address of the Corporation's principal office by duly adopted resolution.

1.3 Purpose and Powers. IPWMAN is organized to provide a system of Mutual Aid among participating public works agencies. The purpose is explicit in the "Illinois Public Works Mutual Aid Network Agreement," which is incorporated herein by reference and which in pertinent part reading as follows:

"The Illinois Public Works Mutual Aid Network (IPWMAN) program is hereby established to provide a method whereby public works related agencies, including, but not limited to, local municipal public works departments, township road districts, unit road districts, county highway departments, public water agencies and public wastewater agencies or any other governmental entity that performs a public works function in need mutual aid assistance may request aid and assistance in the form of personnel, equipment, materials and/or other associated services as necessary from other public works related agencies."

IPWMAN is not organized for profit and no part of the earnings shall inure to the benefit of any member or officer except as compensation for services rendered or for necessary expenses actually incurred and as authorized by the Board of Directors.

1.4 Authority. The Illinois Public Works Mutual Aid Network was organized under the provisions of the Illinois Intergovernmental Cooperation Act on September 17, 2008 and was incorporated under Illinois law as a Not-for-Profit Corporation on January 22, 2009.

The Illinois Intergovernmental Cooperation Act, 5 ILCS 220/1 et seq., provides that any power or powers, privileges or authority exercised or which may be exercised by a unit of local government may be exercised and enjoyed jointly with any other unit of local government including a unit of local government from another state.

Illinois Public Works Mutual Aid Network membership is in full force and in effect with the passage and approval of an executed Mutual Aid Agreement in the form approved by the Board of Directors, a companion ordinance, resolution or other legally binding document by a participating agency, in the manner provided by law, and executed by an authorized representative of a participating public works agency who has the legal authority to sign and enter into the Agreement on behalf of his or her public works agency.

1.5 Registered Agent and Registered Office. The Registered Agent of the Corporation may be either an individual resident in the State of Illinois, or a domestic or foreign corporation authorized to act as such agent. The Corporation shall continuously maintain such an agent in the State of Illinois. A new Registered Agent shall be appointed if the office of such agent becomes vacant for any reason, or such agent becomes disqualified or incapacitated to act, or if the Corporation through the Board of Directors revokes the appointment of such agent by duly adopted resolution. The new appointment shall be made by duly adopted resolution of the Board of Directors and submission of the appropriate statement to the office of the Illinois Secretary of State. Such Registered Agent shall be recognized as an agent of the Corporation on whom any process, notice, or demand required or permitted by law to be served on a Corporation may be served.

1.6 Corporate Seal. The Corporation shall have a seal, which shall have inscribed thereon "Illinois Public Works Mutual Aid Network, Inc." and the year of incorporation.

Article Two
Membership, Ratification and Termination of Membership

2.1 General Membership. Membership shall be limited to public works related agencies and individuals as described in Article One, paragraph 1.3 and as defined in the Illinois Compiled Statutes.

2.2 Membership Types. The Board of Directors, with the advice of the Membership Committee, and by majority vote shall be the sole authority to establish membership status and classification. There are hereby established, the following types of membership:

a. Agency Members. This class of membership is open to all public works related agencies, as defined in Article One, paragraph 1.3. Agencies may be allocated multiple memberships, based on agency size and/or type and as determined by Board of Directors policy.

b. Associate Members. This class of membership is open to members of public works related Agency Individuals, Business and Professional Organizations/Associations, but who do not qualify as Agency Members. This class of membership would have two types: Corporate and Individual.

c. ***Affiliate Members.*** This class of membership is open to all other persons having an interest in the network. This class will have only one type of member: Individual.

d. ***Professional Liaison Members.*** This class of membership would apply to individuals designated by other professional mutual aid organizations and/or state and federal agencies involved in emergency and disaster response and recovery, to provide counsel, advice and support for the mission of IPWMAN. This type of member would not pay dues, but would be granted the same participation and voting privileges as Affiliate Members.

2.3 Voting Privilege. The privilege of holding elective office and, serving on the Executive Committee of IPWMAN is reserved for *Agency Members. Associate Members* are permitted to vote in all elections, serve on and chair Committees (other than the Executive Committee) and otherwise serve the IPWMAN, but may not hold elective office. *Affiliate and Professional Liaison Members* are permitted to serve on and vote on Committees (other than the Executive Committee), however are not eligible to serve as Committee chairs or have voting privileges at Board of Directors meetings.

2.4 Termination of Membership. Members who fail to meet their obligations in accordance with the terms of the Illinois Public Works Mutual Aid Network Agreement or with these By-laws may be suspended or removed from membership by a two-thirds vote of the Board of Directors. Prior to the initiation of any disciplinary action against a member, the member will be notified of a hearing and shall have a right to appear before the Board of Directors.

Article Three
Board of Directors

3.1 General Powers. The affairs and activities of the Corporation shall be managed by or under the direction of its Board of Directors ("Board").

3.2 Composition of the Board. The Governing body of IPWMAN shall be the Board of Directors, consisting of twenty-one (21) elected members, representing the following:

- 2 members from each of the eight (8) IPWMAN regions (Shown in Exhibit 1).
- The President
- The Vice-President
- The Secretary
- TheTreasurer
- The Immediate Past President.

In the event there are no eligible members able to serve as Board representatives of a particular region, then a member from outside the region may be selected to represent that region.

All officers and members of the Board of Directors shall serve without compensation.

3.3 Term. Each Regional Director will serve a three-year term.

Initially, beginning in October of 2009, terms shall be staggered, rotating according the following schedule:

IPWMAN Regions	3, 6 and 8	3-year terms
IPWMAN Regions	2, 7 and 9	2-year terms
IPWMAN Regions	4 and 11	1-year term

Following the initial elections, terms shall be for three years.

3.4 Vacancy on the Board of Directors. In the event a vacancy should occur in one or more of the Regional Director positions by reason of lack of eligible candidate, resignation, removal, death or election to another office, the remainder of the term of office shall be filled by the appointment of a replacement recommended by the member agencies from that particular region. The appointment is to be confirmed by the remaining members of the Board.

If, within sixty (60) days of the notice of the vacancy, the Region fails to achieve consensus on a replacement, the Board of Directors is hereby authorized to designate a replacement from any Region to represent the members of the affected Region until the next opportunity to conduct an election, at which time a successor will be elected to complete the remainder of the term (if any).

3.5 Authority. The Board of Directors shall have the authority to take all appropriate actions and to perform all duties required to accomplish the purposes of IPWMAN.

3.6 Regular Meetings. The Board of Directors shall convene at least annually at a time and place specified by the Board. The President shall preside at the meeting and conduct business for IPWMAN. Draft minutes of these meetings shall be available to all members at least 30 days before the following meeting.

3.7 Annual Membership Meeting. The Annual Meeting of the IPWMAN membership shall be held during the month of October each year at a time and place specified by the Board of Directors.

3.8 Special Meetings. The President, at his or her discretion, or a majority of the Executive Committee, or any six members of the Board of Directors, or five percent (5%) of the membership may call a special meeting of the Corporation by giving at least five days advance written notice to each member, specifying the time, place, and purpose of the meeting.

3.9 Quorum. Eleven (11) members of the Board of Directors shall constitute a quorum thereof. Twenty percent of the membership shall constitute a quorum to conduct business at a regular or special meeting of the membership.

3.10 Waiver of Notice. Any member may waive notice of any meeting, and attendance

of such member at any meeting shall constitute a waiver of notice of such meeting.

3.11 Committees and Advisory Bodies. Committees exist for the purpose of implementing the vision, mission, goals and legal obligations of the Corporation. The Board of Directors may, from time to time, establish or appoint one or more committees, task forces or advisory bodies.

All member types are encouraged and allowed to serve on committees, however, the chair must be an Agency or Associate member. All members shall serve at the pleasure of the Board of Directors. The following standing committees are hereby established:

- Finance
- Management
- Membership
- Nominating
- Operations
- Training

The duties and responsibilities of all Committees shall be as defined in the Administrative Policy Manual of IPWMAN. The Board of Directors may establish additional committees or Task Forces if and when the need arises.

3.12 Action without Meeting. If a matter of immediate and critical need shall arise requiring action of the Board of Directors and it is impracticable to wait to convene a regular or special meeting, the matter may be submitted electronically to each member entitled to vote thereon for consideration upon approval of not less than two Executive Committee members. The notice of proposal shall specify a deadline for voting on the matter submitted not less than seven (7) days from the date of notice. If approved by a majority of the members of the Board of Directors, or the required number of votes that may be elsewhere specific in these by-laws, the action so approved shall be considered the same as though approved at a formal meeting.

Article Four
Executive Officers

4.1 Executive Officers of the Corporation; The executive officers of the Corporation shall be a President, a Vice President, Secretary, Treasurer, Immediate Past President, and two members of the Board of Directors selected by the Board of Directors, who together shall constitute the Executive Committee. All such officers shall be members of the Board of Directors. The Executive Committee of IPWMAN shall be elected from the Board of Directors members who shall have been members in good standing of the Corporation for at least one year prior to their election.

4.2 Term. The Officers of the Corporation shall hold office for a term of two (2) years or until their successors have been duly elected, providing they continue to qualify for active membership during their term of office. All officers may be re-elected or appointed for

additional terms of office. The Vice-President, upon completion of his/her two-year term of office will transition to the position of President for a two-year term. The Vice-President would have the right to decline the position of President if circumstances would prevent him/her from being able to serve as President. The outgoing President will remain as a voting member on the Board of Directors as the Immediate Past President for a two-year term. Upon completion of the position of Immediate Past President, the officer would be eligible to pursue another officer position within the organization. The President, consistent with Section 5.1b and subject to advice and consent of the Board of Directors, will fill vacancies to positions on the Executive Committee within the two-year terms.

4.3 The President. The President shall:

a. Be the principal executive officer of the Corporation and shall act as the Chairman of the Board of Directors.
b. Supervise and control all of the business and affairs of the Corporation, subject to the general oversight of the Board of Directors.
c. Preside at all meetings of the Board of Directors and the Executive Committee.
d. Serve as an Ex-Officio member of all committees
e. Sign, with the Secretary or any other proper officers of the Corporation, any deeds, mortgages, bonds, contracts, or other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof has been expressly delegated by the Board of Directors to some other officer or agent of the Corporation, or shall be required by law to be otherwise signed or executed.
f. Perform all duties incident to the office of President and such other duties as may be prescribed by the Board of Directors from time to time.
g. Make all committee appointments with the advice and consent of the Board of Directors.

4.4 The Vice President. In the absence of the President or in the event of his or her resignation, death, inability or refusal to act, the Vice President (or in the event of his or her death, inability or refusal to act, the Secretary or in the event of his or her death, inability or refulas to act, the Treasurer) shall:

a. Perform the duties of the President and, when so acting, shall have and exercise all the powers of and be subject to all the limitations upon the President's powers.
b. Serve as an assistant to the President and may perform such other duties as from time to time may be assigned to him by the President or the Board of Directors.
c. If a vacancy occurs in the office of the President, the Vice-President will succeed in that office for the remainder of the term.

4.5 The Secretary. The Secretary shall:

a. Keep the records of the Corporation.
b. Prepare a written record of the meetings and any formal proceedings of the Corporation and make copies of such minutes available to each of the members.
c. Record and keep all official correspondence of the Corporation.

d. Keep an official register of each member of the Corporation.
e. Have charge of and safely keep all such additional books and papers as the Board may direct.
f. Have custody of the seal of the Corporation and affix such seal to all documents, the execution of which, on behalf of the Corporation under its corporate seal, has been duly authorized in accordance with these by-laws.
g. Perform all duties, which are incident to the office of Secretary of a not for profit corporation subject, however, at all times to the direction and control of the Board.
h. At the expiration of the Secretary's term of office, he/she shall turn over to his/her successor, all books, papers, records, electronic data, money, securities and other valuable effects belonging to the Corporation, taking receipt for same from his/her successor.
i. Administer the election of the Board of Directors.

4.6 The Treasurer. The Treasurer shall:

a. Have general oversight over all funds and securities of the Corporation.
b. Have authorization, along with at least one other member from the Executive Committee, to endorse, or cause to be endorsed in his or her name, on behalf of the Corporation, all checks, notes or other obligations and evidence of the payment of money paid by the Corporation coming into his or her possession, or other officers or employees.

c. See that all funds received by or on behalf of the Corporation are promptly deposited in such banks or trust companies as may be selected as depositories of the Corporation by the Board and shall also see that all securities are placed in safe-keeping in the manner directed by the Board.
d. Pass on the electronic system of accounts and reports and provide for general overseeing and audit thereof. The report of each such audit shall be submitted to the Board.
e. Prepare a budget annually for review by the Board of Directors and file any reports required by any government agency (i.e. IRS Tax Return, Secretary of State Annual Report of Officers).
f. Perform all duties, which are incident to the office of Treasurer of a not for profit corporation subject, however, at all times to the direction and control of the Board.
g. Chair the Finance Committee.
h. Serve as Ex Officio member of the Audit Committee.
i. Set time and date for the annual audit.
j. At the expiration of the Treasurer's term of office, he/she shall turn over to his/her successor, all books, papers, records, electronic data, money, securities and other valuable effects belonging to the Corporation, taking receipt for same from his/her successor.

4.7 Immediate Past President. The Immediate Past President shall:

a. Co-chair of the Annual Conference/Meeting Committee.
b. Co-chair the Nominating Committee.
c. Serve as one of the two (2) at-large members of the Executive Committee
d. Assist the President, as requested.

Article 5
Nominations and Elections

5.1 Nominating Committee.

a. For all elections, the President shall appoint a Nominating Committee consisting of five (5) members. It shall be the duty of the Nominating Committee to provide a slate of qualified candidates to fill the offices of IPWMAN. The current officers shall not serve as Nominating Committee members.

b. This committee is also empowered to recommend replacements for vacancies on the Executive Committee to the Board of Directors that are not covered elsewhere in these By-Laws.

c. Any member may submit a nomination for candidates for the Board of Directors and/or Executive Committee.

5.2 Election Procedures. Elections to the Board of Directors shall be by paper or electronic ballot sent to the each member at the address on file with the Secretary. The person receiving the highest number of votes shall be declared elected. The President shall appoint a three member Teller Committee to count ballots and certify elections. The Teller Committee shall tabulate the votes and report the results to the Board of Directors. Elected officers shall be installed at the next annual meeting and shall assume their duties of office at that time. Uncontested elections may be held by voice vote at the Annual Meeting.

Article Six
Administrative Officers and Personnel

6.1 Designation of Administrative Officers. The Board of Directors shall designate titles, appoint and discharge such administrative staff officers of the Corporation, as it shall deem necessary. Such administrative staff officers shall not be members of the Board and such appointees shall hold their offices for such term, exercise such powers, and perform such duties as shall be determined from time to time by the Board. The duties and responsibilities of all appointed staff personnel shall be defined in the IPWMAN "Administrative Policy Manual". Such Administrative Officers shall serve at the pleasure of the Board of Directors

6.2 Compensation. If applicable, **t**he Board of Directors shall determine compensation and benefits for all administrative staff.

Article Seven
Indemnification of Officers, Board of Directors, Employees and Agents

7.1 Actions other than by or in the Right of the Corporation. The Corporation and its Board of Directors has the power to indemnify itself though insurance or bonds as it deems necessary for the good of the organization.

7.2 Insurance. The Corporation shall have the power and authority to purchase and maintain insurance on behalf of any person who is a member, employee or agent of IPWMAN or is serving at the request of the Corporation against any liability asserted against him or her as a result of, or in any capacity representing IPWMAN.

7.3 Indemnification All Executive Officers shall be bonded by the Corporation in such form and amount as may be determined by the Board of Directors, the cost of such bond shall be borne by the Corporation.

Article Eight
Contracts, Loans, Checks, Deposits, Dues and/or fees and Gifts

8.1 Contracts. The Board may authorize any officer or agent of the Corporation, in addition to the officers so authorized by these by-laws, to enter into any contract or sign any instrument in the name of the Corporation, and such authority may be general or confined to specific instances.

8.2 Borrowing. No loan shall be contracted on behalf of the Corporation and no evidence of indebtedness shall be issued unless authorized by a resolution of the Board. Such authority may be general or confined to specific instances.

8.3 Checks and Drafts. All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness (issued in the name of the Corporation) shall be signed by such officers or agents of the Corporation as shall from time to time be determined by the Board. In the absence of such determination by the Board, such instruments shall be signed by the Treasurer and countersigned by the President or the Vice President.

8.4 Deposits. All funds of the Corporation shall be deposited from time to time to the credit of the Corporation in such banks, trust companies or other depositories as the Board may select.

8.5 Membership Dues and/or Fees. Membership dues and/or fees will be determined by the Board of Directors. The amount of the membership dues and/or fees shall be reviewed and established annually by the Board of Directors. Dues and/or fees shall be due within thirty (30) days of January 1 of each year.

The Board of Directors will determine the method and amount of any other fees to be

charged or assessed by the Corporation.

8.6 Gifts. The Board may accept on behalf of the Corporation any contribution, gift, bequest or devise for the general purposes or for any special purpose of the Corporation, unless otherwise prohibited by law.

8.7 Reimbursement. The Board shall adopt reimbursement procedures and associated policies.

Article Nine
Fiscal Year, Books and Minutes

9.1 Fiscal Year. The fiscal year and business year of the corporation shall begin on January 1 and end on December 31.

9.2 Books and Minutes. The Corporation shall keep correct and complete books and records of account and shall also keep minutes of the meetings of its Board.

Article Ten
Distribution of Assets upon Dissolution

If at any time the dissolution of this Corporation is authorized pursuant to the General Not-For-Profit Corporation Act of the State of Illinois, the members of the Board of Directors then holding office as such shall distribute the assets of the Corporation remaining after payment, satisfaction and discharge, or adequate provision therefore, of all liabilities and obligations of the Corporation, to a domestic or foreign corporation, charity or organization engaged in activities substantially similar to those of this Corporation, pursuant to a plan of distribution as duly adopted by the Board. The Board shall incur no personal liability for failure to ascertain, after a reasonable examination, the existence of any contributor.

Article Eleven
Amendment to Articles of Incorporation

The Articles of Incorporation of this Corporation may be changed or altered pursuant to the statutes of the State of Illinois. Proposed amendment(s) shall be adopted upon receiving the affirmative vote of at least seventy-five percent (75%) of the ballots received from the members of the Corporation, provided, however, that such amendment(s) shall not become effective until a certificate of amendment is issued by the Secretary of State of the State of Illinois.

Paper or electronic ballots shall be sent to each member. The deadline for the return of the ballots shall be established by the Board of Directors, but shall be a minimum of at least thirty (30) days from the date the ballots were distributed to the members.

Article Twelve

Amendment to By-Laws

The By-Laws of the Corporation may be repealed, modified, altered, or amended at the annual meeting of the Board of Directors, by an affirmative vote of at least three-fifths (60%) of the members present provided, however, that no repeal, modification, alteration or amendment may be adopted at the regular or special meeting where introduced unless the Secretary, at least thirty (30) days before such meeting, shall have provided, by paper document or electronically, a copy of such proposed amendment to each member.

Article Thirteen
Retention of Property Interest

All right, title, and interest, both legal and equitable in and to property of the Corporation shall remain in the Corporation. If such property shall be in the possession of a member, Executive Officer, Administrative Officer or such other person so entrusted, it shall be immediately returned to the Corporation in the event of that person's death, resignation, removal or such other action disassociating that person with the Corporation.

Article Fourteen
Rules of Procedure

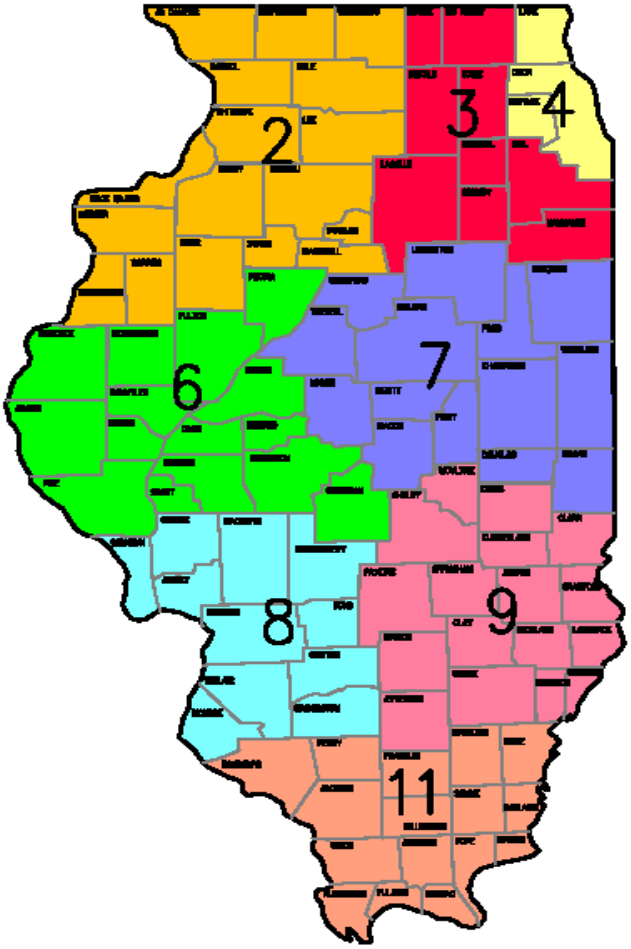
The rules contained in the current edition of "Robert's Rules of Order – Revised" shall govern the procedural conduct of the Board of Directors and Executive Committee and its committees and advisory bodies in all cases to which they are applicable and in which they are not inconsistent with these By-laws. Additionally, the Board may adopt its own rules of procedure, which shall not be inconsistent with these by-laws.

Article Fifteen
Establishing an Interim Board of Directors

Until the initial elections are held and the Board of Directors assumes office, the Illinois Public Works Mutual Aid Network Steering Committee shall serve as the Interim Board of Directors for the Illinois Public Works Mutual Aid Network, Inc. (IPWMAN).

Exhibit 1

IPWMAN REGIONAL MAP



Will County Hazard Risk Assessment Overbank Flooding Results

Disclaimer:
The estimates of social and economic impacts contained in this report were produced using HAZUS loss estimation methodology software and which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific hazard. This analysis is intended to provide conceptual information that can be used to identify mitigation opportunities. These
information.

January 6, 2006

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Overbank Flood Hazards

The HAZUS-MH Flood Model determines the flood risk to a community based on nationwide GIS data sets. The model allows users to characterize flood levels and estimate the expected amounts of damage to buildings and infrastructure as well as the amount of displaced population, shelter requirements, and a variety of other outputs. The FEMA Flood Insurance Rate Maps (FIRM) indicate that most of Will County's built environment is outside of the Base Flood Elevation area. The Base Flood Elevation (BFE) is defined as the area that has a 1% chance of flooding in any given year. Overbank flooding of Will County was modeled using FEMA's GIS-based HAZUS-MH risk assessment application. The flood hazard modeling was based on areas that are potentially vulnerable to flooding as indicated on the digital flood maps provided by Will County.

Review Existing Information

Existing maps were used to identify the areas of study. Will County has digitized copies of the hardcopy FEMA Flood Insurance Rate Maps (FIRMS). Hydrologic analysis was performed for all reaches identified in the Will County flood GIS data.

Analysis

The HAZUS-MH Flood model can be used in a variety of ways for the purpose of predicting flooding and assessing the impacts of that flooding. Model options range from having HAZUS perform all necessary hydrologic and hydraulic calculations based solely upon a user provided digital elevation model to integrating selected output from other flood models for the purpose of developing what are typically more accurate flood depth grids.

The analysis conducted for Will County used two different approaches that took advantage of the capabilities of the HAZUS model. In both cases, we studied the potential impacts of overbank flooding along the Calumet River which were based upon the Base Flood Elevation (BFE) defined on the flood maps for that area. The BFE is defined as the area that has a 1% chance of flooding in any given year. For the first type of analysis we applied a level 2 methodology which used discharges from the Will County FEMA Flood Insurance Study, Revised March 2003. This study utilized discharges for streams studied in detail.

For the second type of HAZUS-MH analysis, a Level I methodology was applied for the remaining flood prone stream segments. A Level I methodology performs the entire hydrologic and hydraulic analysis based upon a user provided digital elevation

model. For this project we used the elevation model obtained from Will County. This digital elevation model consists of elevation points at approximately 1 meter intervals.

Assumptions:

HAZUS generates a combination of site specific and aggregated loss estimates depending upon the analysis options that are selected and upon the input that is provided by the user. Aggregate inventory loss estimates – which include building stock analysis - are based upon the assumption that building stock is evenly distributed across census blocks. Therefore, it is possible that overestimates of damage will occur in some areas while underestimates will occur in other areas. With this in mind, total losses tend to be more reliable over larger geographic areas than for individual census blocks.

Site specific analysis is based upon loss estimations for individual structures. Analysis of site specific structures takes into account the depth of water in relation to the structure. It also takes into account the actual dollar exposure to the structure for the costs of building reconstruction, content, and inventory. However, damages are based upon the assumption that each structure falls into a structural class – for example, small versus large hospitals - and that structures in each class will respond in similar fashion to a specific depth of flooding. Site specific analysis is also based upon a point location rather than a polygon and therefore the model does not account for the percentage of a building that is inundated. These assumptions suggest that the loss estimates for site specific structures as well as for aggregate structural losses need to be viewed as approximations of losses that are subject to considerable variability rather than as exact engineering estimates of losses to individual structures.

Results

The total economic loss is included in Table 1 and depicted by census block in Figures 1 and 2. The majority of the estimated building losses, 88%, were related to flooding of residential structures. As expected, the majority of the flood damage occurs in the western half of the county in the urban areas near the City of Joliet. Figures 3, 4, and 5 include five flood prone areas with orthophotos the HAZUS-MH calculated flood boundary (in red), Will County digitized flood map boundary (in blue), and census block outlines (in black) shown. These census blocks have the highest calculated economic losses. These 9 census blocks had estimated total losses exceeding $6 million each**.** The two census blocks in Figure 3 are located near Route 59 in the Village of Plainfield, and are impacted by flooding from the DuPage River. Figure 4 shows a census block in Joliet near the intersection of I-55 and Caton Farm. A number of the residential units are within both the digitized and calculated flood boundary areas, and are also impacted by flooding

from the DuPage River. Figure 5 census blocks are located on the banks of the Kankakee River NW of Lorenzo near County Line Road and Blodgett.

Table 1. Will County Total Economic Loss - 100-Year Flood

General Occupancy	Estimated Total Buildings	Total Damaged Buildings	Total Building Exposure X $1,000	Total Economic Loss X $1,000	Building Loss X $1,000
Commercial	1,004	6	$2,549,025	$100,806	$10,482
Education	20	0	$230,858	$14,191	$405
Government	37	0	$47,902	$32,956	$708
Industrial	246	0	$772,712	$10,495	$3,162
Religious/Non-Profit	36	0	$132,948	$3,608	$119
Residential	147,744	1,485	$27,315,338	$179,631	$114,572
Total	**149,087**	**1,491**	**$31,048,783**	**$341,687**	**$129,448**

Note: The estimated total buildings number is a calculated value based on total square footage of damage in each census block. For a given census block damage, the number of buildings can equal 0 and incur damage if the total square footage of damage does not add up to one equivalent structure.

***Building Losses (see above table)**

Building losses (structural and non structural repair costs for damaged and destroyed buildings)
Content Losses (Costs of damage to building contents)
Inventory losses (Losses of building inventory contents related to business activities)

***Total Economic Losses (see above table)**

Building losses
Wage losses (consistent with income loss)
Capital-related income losses (a measure of the loss of productivity, services or sales)
Rental income losses (to building owners)
Relocation expenses (for businesses and institutions)

Figure 1. Will County Total Economic Loss – 100-Year Flood

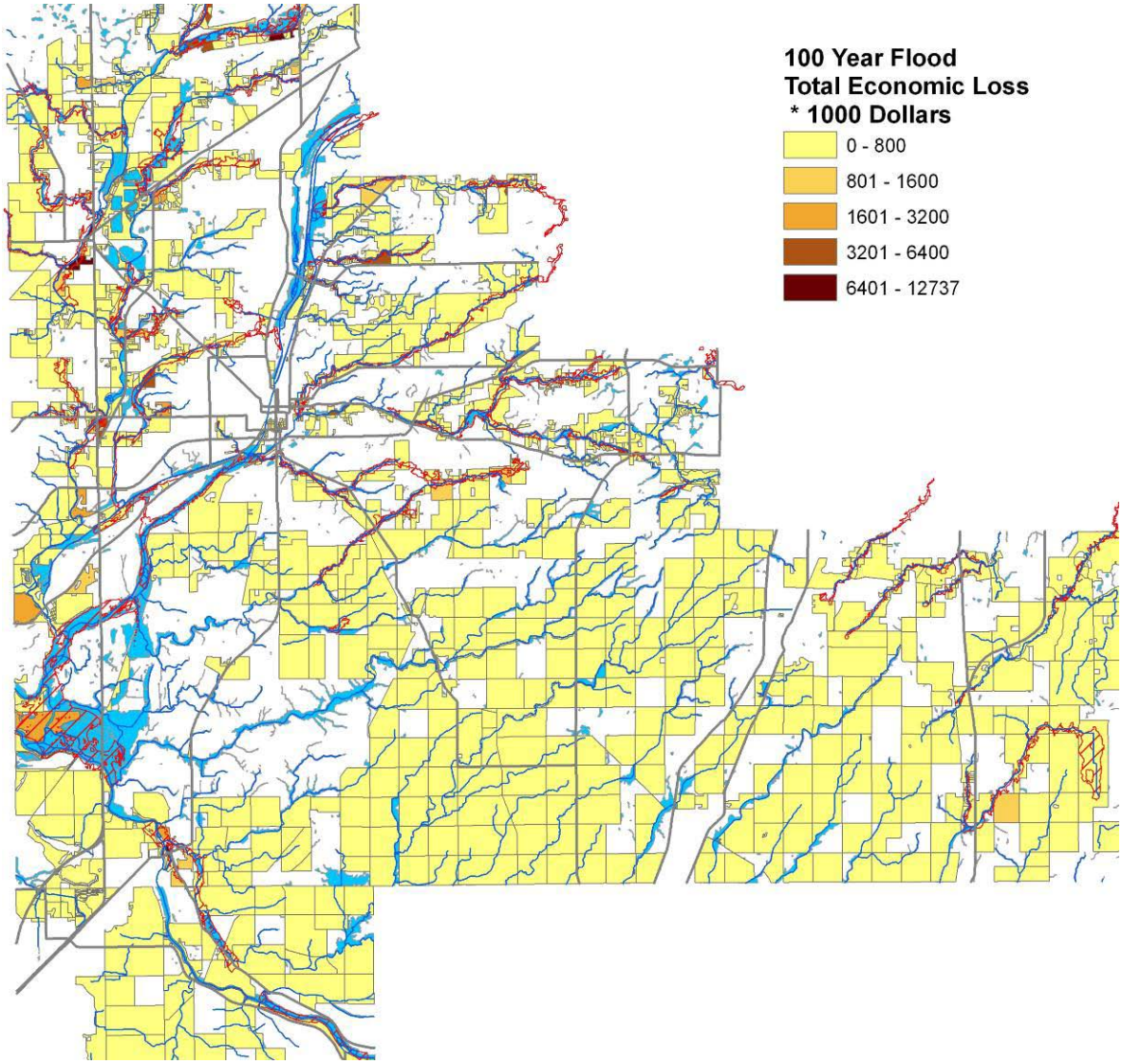


Figure 2. Will County Urban Areas (Joliet) Total Economic Loss - 100-Year Flood

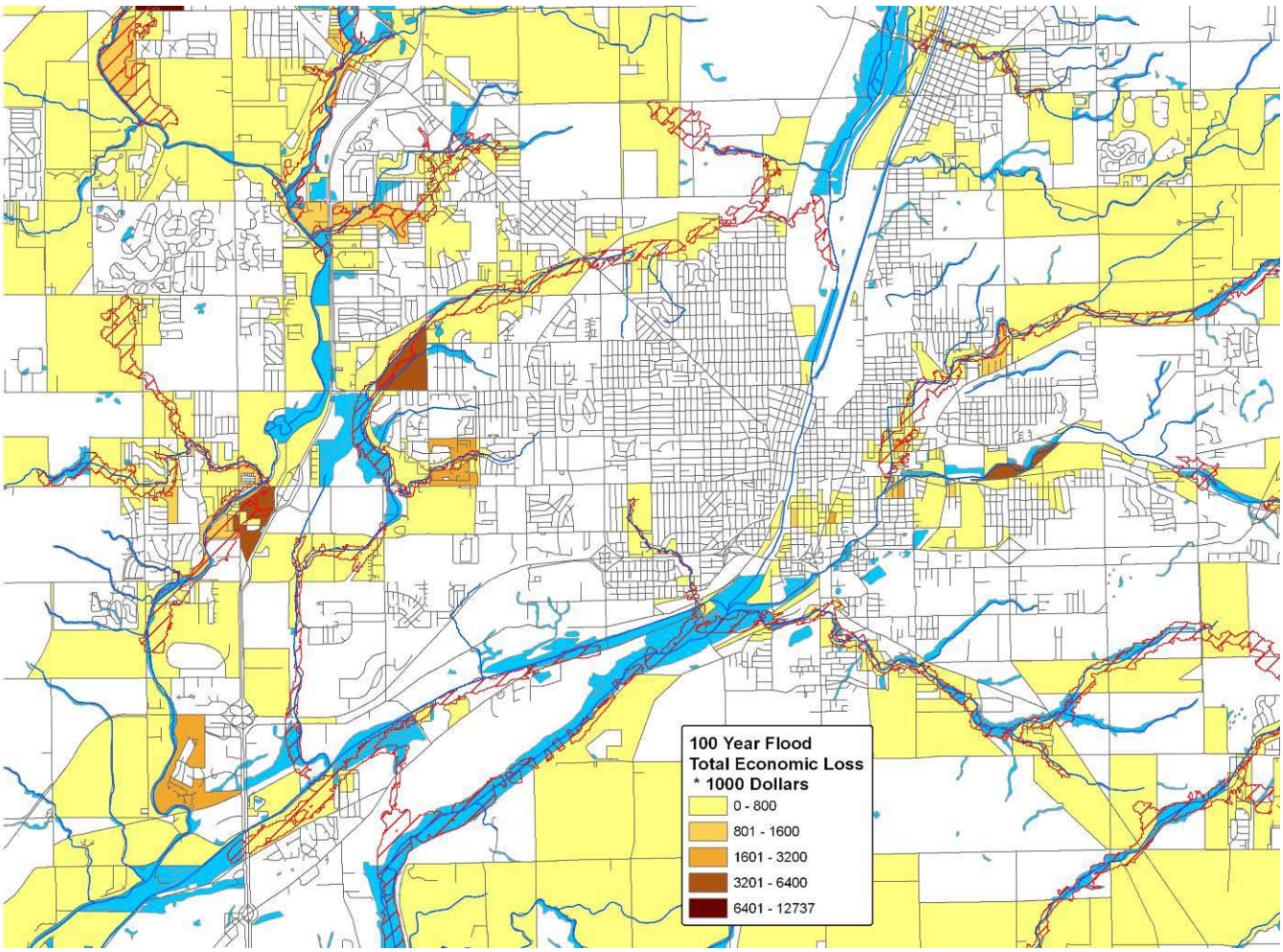


Figure 3. Detail census blocks (Plainfield) identified as having significant damage

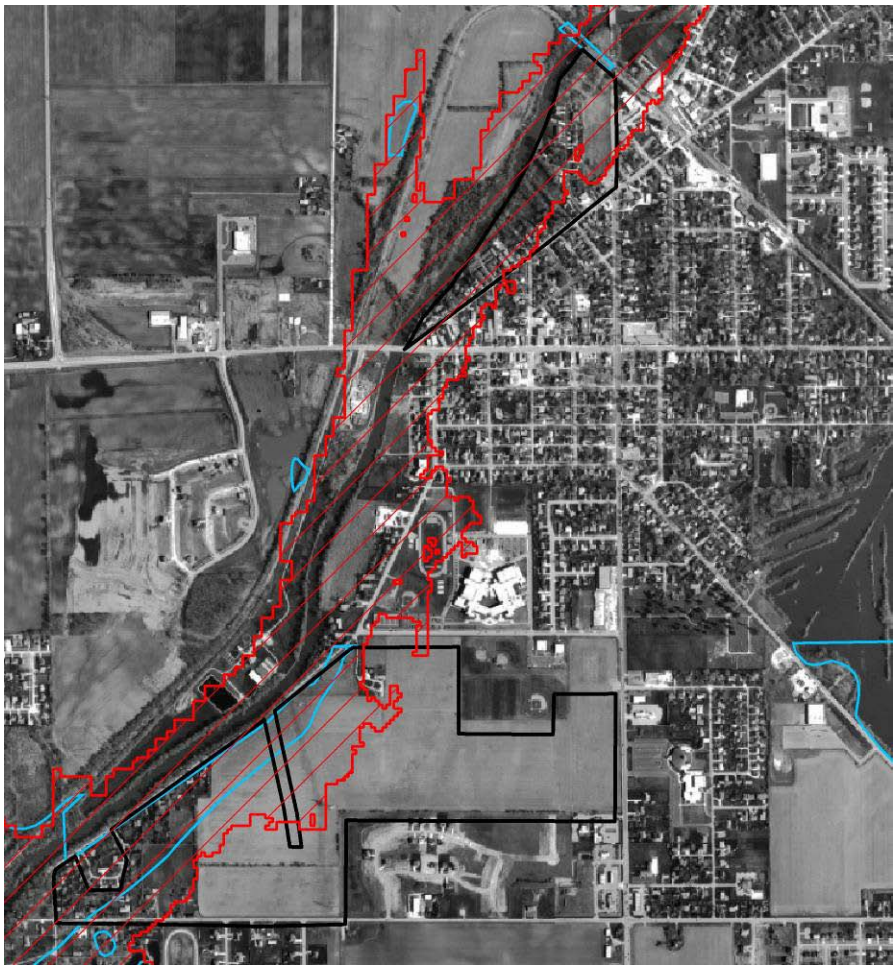


Figure 4. Detail census block (Joliet) identified as having significant damage

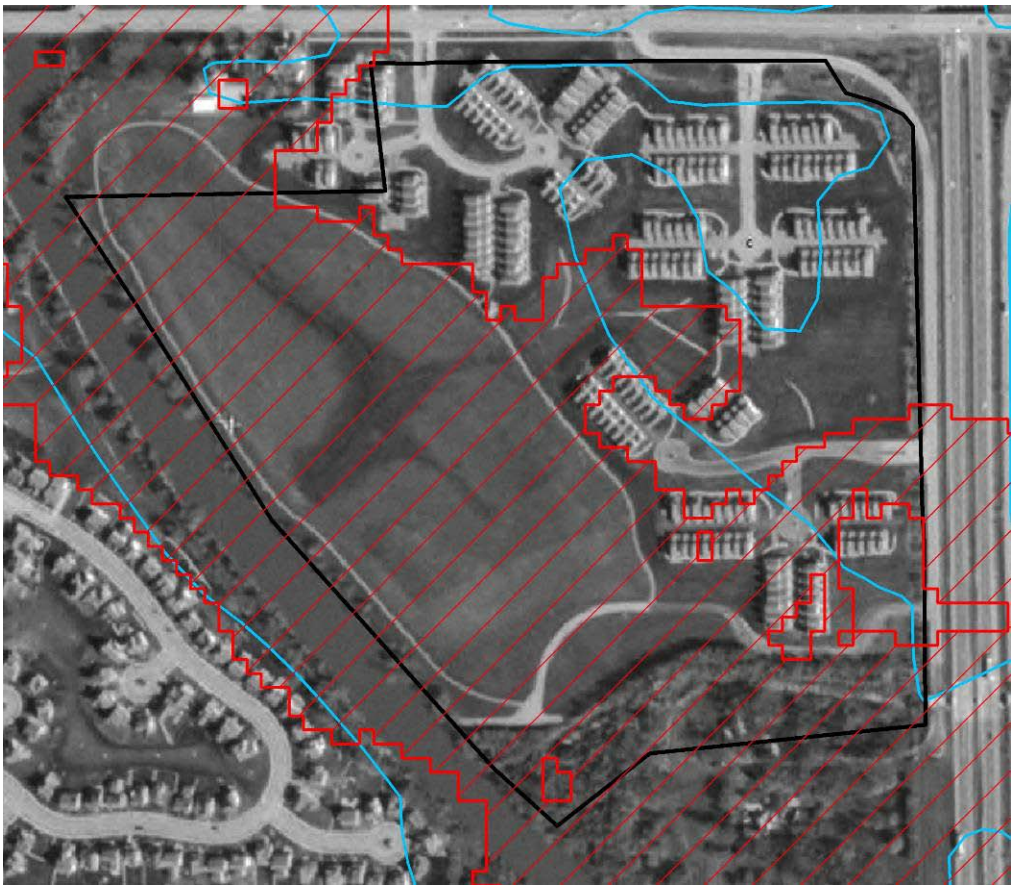
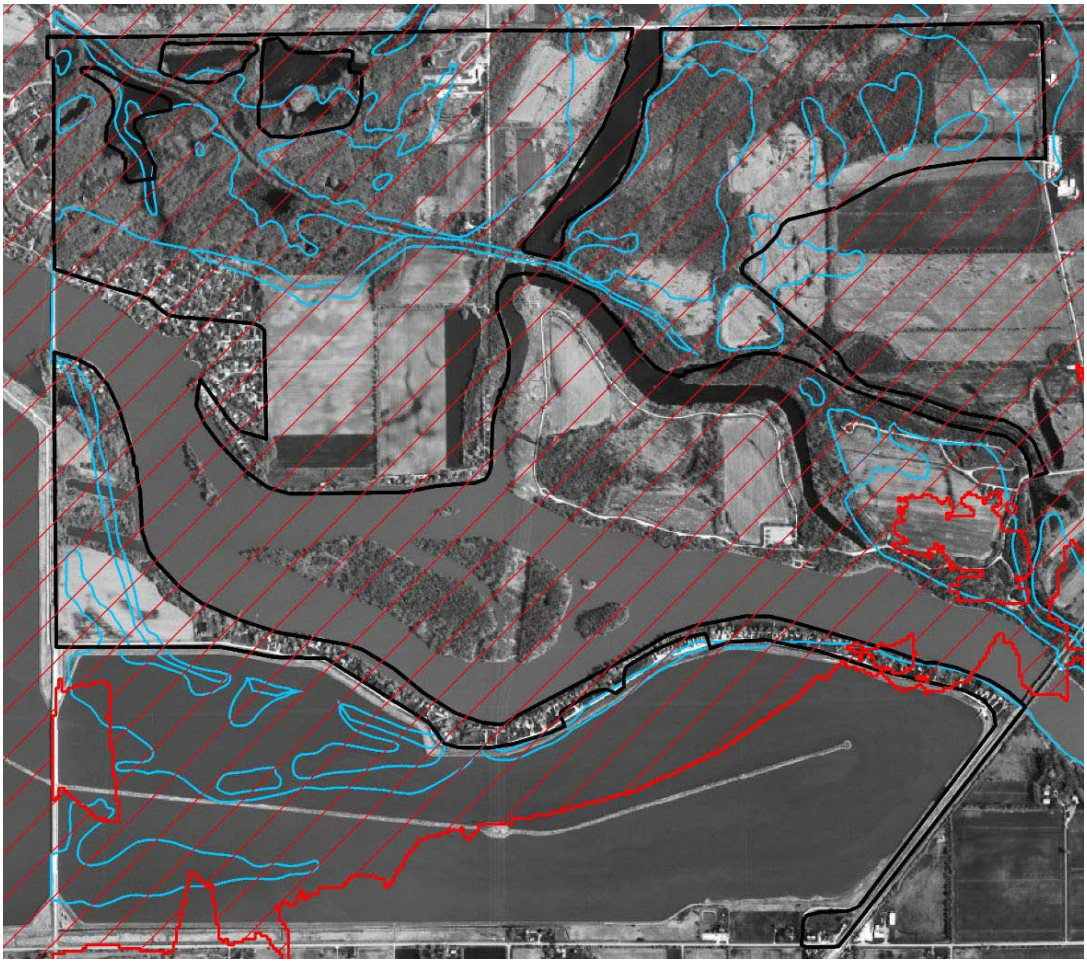


Figure 5. Detail census blocks (Lorenzo) identified as having significant damage



Essential Facility Losses

The HAZUS analysis identified essential facilities that may be subject to flooding. These are identified in table 2. An additional analysis was performed to identify essential facilities within the digitized flood map boundaries. This analysis identified Joliet FD #4, Crete Township FPD #2, Custer Park FPD, Liberty Elementary, and Three Rivers School as possibly prone to flood damage.

Table 2. Will County Essential Facilities – 100-Year Flood

TYPE	NAME	ADDRESS	HAZUS_ID
Fire Stations	Beecher FPD #1	711 Penfield St	IL001022
Fire Stations	Channahon FPD #1	24929 S Center St	IL001029
Fire Stations	Crete Township FPD #2	25048 S Klemme Rd	IL001056
Fire Stations	Custer Park FPD	21750 Highway 113	IL001031
Fire Stations	Joliet FD #3	319 Grover St	IL001063
Fire Stations	Joliet FD #4	868 Draper Ave	IL001062
Fire Stations	Joliet FD #8	2293 Essington Rd	IL001058
Schools	B Noonans Child Care (Lockport)	947 Division St	IL005440
Schools	Crete-Monee Alt. Prgm. CAP JR/CAP	1500 Sangamon St	IL005368
Schools	Crete-Monee Ed. Center	1500 Sangamon St	IL005367
Schools	Liberty Elem.	1401 Essington Rd	IL005375
Schools	Shorewood	210 School Rd	IL005291
Schools	Three Rivers	24150 S Minooka Rd	IL005286

Will County Hazard Risk Assessment
Historical Tornado Scenario Results

Disclaimer:
The estimates of social and economic impacts contained in this report were produced using limited GIS and HAZUS loss estimation data. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific hazard. This analysis is intended to provide conceptual information that can be used to identify mitigation opportunities. These results can be improved by using enhanced inventory data and h

January 9, 2006

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Tornado Hazards

GIS analysis was utilized to determine the impacts of the 1990 Plainfield, Illinois F4 tornado that skipped through Will County during mid afternoon. Although the track of this tornado was identified, detailed information on the area damaged could not be determined. HAZUS-MH data, updated with GIS data provided by Will County, was utilized to identify structures within the damaged area. The potential loss from this event was projected based on today's built environment and in today's economy.

Review Existing Information

GIS analysis was used to determine the potential impacts of an F4 tornado similar to the 1990 tornado, the path of which was determined from a map provided in the 2003 Will County Hazard Analysis. The tornado path is shown in Figure 1.

This analysis used tornado widths determined by the Fujita-Pearson Tornado Rating scale. These tornado widths were based on guidelines developed by Impact Forecasting, a wholly owned subsidiary of Aon Corporation. It should be noted that these numbers and descriptions are just guidelines and are based on conceptual wind speeds, path widths, and path lengths. There is no guarantee that every tornado will fit exactly into one of these six categories. Table 1 is a recreation of the Fujita-Pearson Number table developed by Impact Forecasting.

Figure 1: Historical tornado path

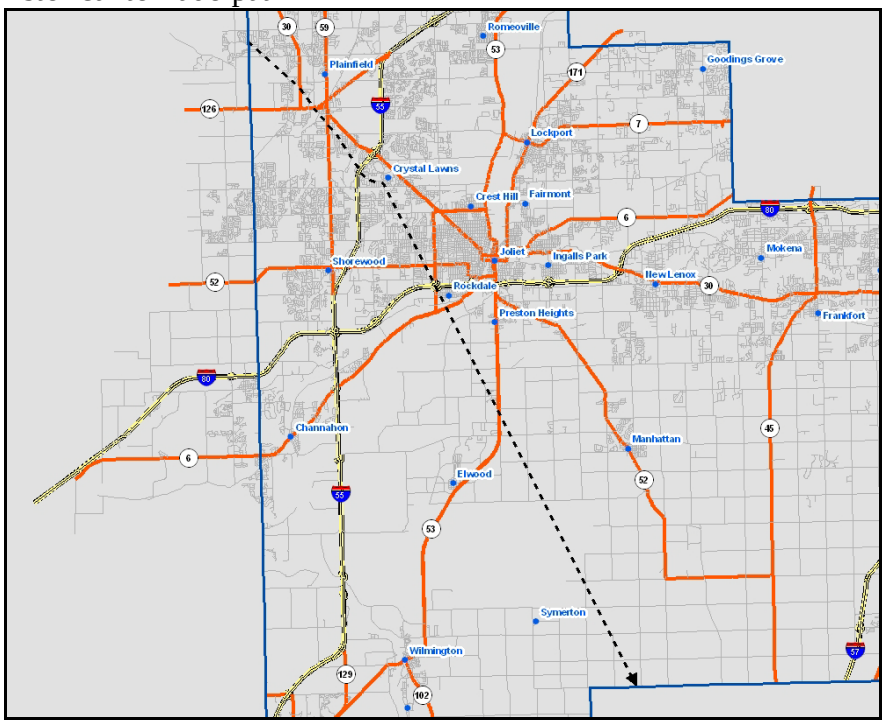


Table 1: Fujita-Pearson Tornado Rating

Fujita-Pearson Number	Estimated Wind Speed	Path Width	Path Length	Description of Destruction
0 (Gale)	40 -72 mph	6 - 17 yards	0.3 - 0.9 miles	Light damage, some damage to chimneys, branches broken, sign boards damaged, shallow-rooted trees blown over.
1 (Moderate)	73 - 112 mph	18 - 55 yards	1.0 - 3.1 miles	Moderate damage, roof surfaces peeled off, mobile homes pushed off foundations, attached garages damaged.
2 (Significant)	113 - 157 mph	56 - 175 yards	3.2 - 9.9 miles	Considerable damage, entire roofs torn from frame houses, mobile homes demolished, boxcars pushed over, large trees snapped or uprooted.
3 (Severe)	158 - 206 mph	176 - 566 yards	10 - 31 miles	Severe damage, walls torn from well-constructed houses, trains overturned, most trees in forests uprooted, heavy cars thrown about.
4 (Devastating)	207 - 260 mph	0.3 - 0.9 miles	32 - 99 miles	Complete damage, well-constructed houses leveled, structures with weak foundations blown off for some distance, large missiles generated.
5 (Incredible)	261 - 318 mph	1.0 - 3.1 miles	100 - 315 miles	Foundations swept clean, automobiles become missiles and thrown for 100 yards or more, steel-reinforced concrete structures badly damaged.

Analysis

According to the Impact Forecast methodology, a F4 tornado will have a width of 0.3 to 0.9 miles. The Fujita-Pearson scale describes the impact as "Complete damage, well-constructed houses leveled, structures with weak foundations blown off for some distance, large missiles generated." Once the historical path was digitized, two buffers were created. The first was 0.3 miles in width (the yellow buffer) and the second was 0.9 miles in width (the orange buffer).The buffers are depicted in Figure 2.

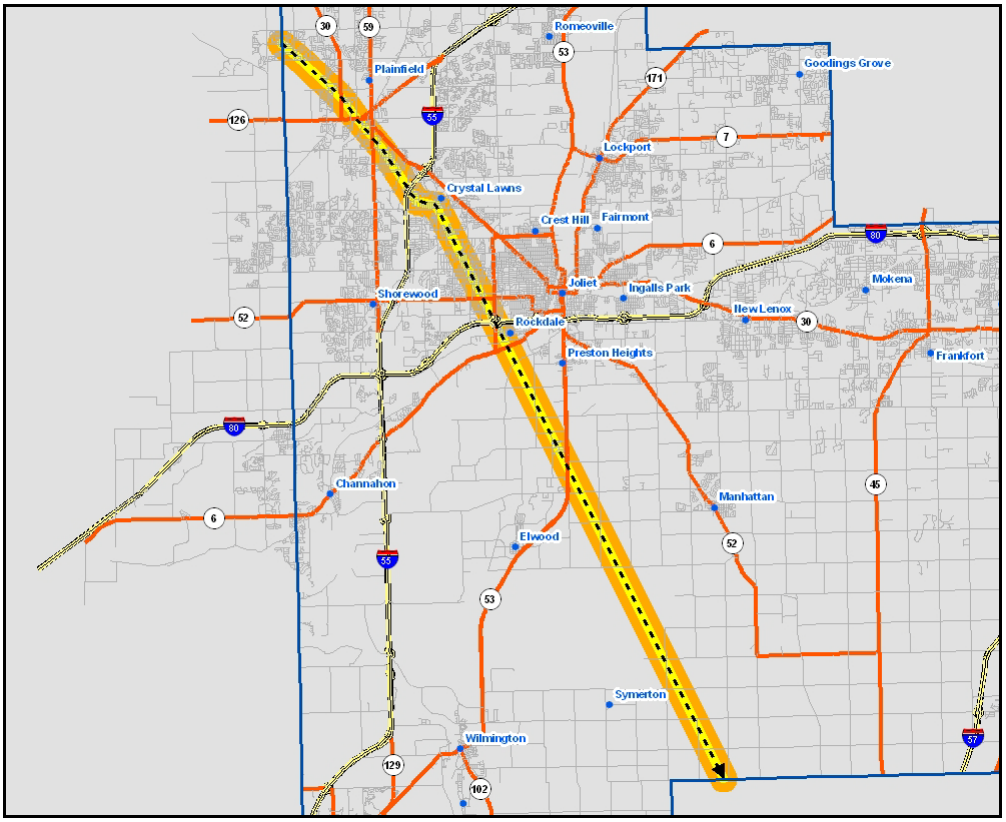
The 2000 Census Block layer that is provided with HAZUS was then added to ArcMap. For each of the two buffers, HAZUS-MH data consisting of the 2000 Census Block layer, the building count layer, and the building dollar exposure were "clipped" thus creating two new layers, each one the same geometric size and shape as the buffer. For each of these new layers, the shape's area field was updated.

A field was added to the table to denote the percentage of each Census Block that fell inside the buffer. To populate this field, the area of each clipped Census Block was divided by the area of the original Census Block. The percentages were then multiplied by the original building count, exposure, and population values.

Assumptions:

- It was assumed that all buildings and population were evenly distributed across each census block. Thus, if 50% of a census block fell within the buffer area, it was assumed that 50% of the structures and population also fell within that area.

Figure 2: F4 tornado path and buffer



Results

The results of the analysis are depicted in Tables 2, 3, and 4. The figures for exposure are an estimate of building replacement costs and assume the buildings are completely destroyed.

Table 2 shows the estimated building damage by type and dollar loss within 0.3 miles of the tornado path. An estimated 2,413 buildings would be damaged, totaling over 574 million. Of the buildings damaged, 2,368 are residential structures, totaling almost 486 million.

Table 3 shows the estimated building damage by type and dollar loss within 0.9 miles of the tornado path. An estimated 6,718 buildings would be damaged, totaling almost 1.6 billion. Of the buildings damaged, 6,590 are residential structures, totaling over 1.3 billion.

Table 4 shows the estimated number of people affected. Within 0.3 miles of the tornado path, there would be almost 9,000 people. Within 0.9 miles of the tornado path, there would be over 23,000 people.

It is important to note that these estimates are based on an area weighted analysis. In this analysis it was assumed that all buildings and population were evenly distributed across each census block. Thus, if 50% of a census block fell within the buffer area, it was assumed that 50% of the structures and population also fell within that area. In reality, the actual number of buildings and people could be much higher or lower than estimated.

Table 2: Estimate of Damage within 0.3 Miles

Occupancy Type	Building Counts	Exposure (thousands of dollars)
Residential	2,368	485,896
Commercial	44	77,249
Industrial	1	6,901
Agriculture	0	276
Religious	0	1,956
Government	0	58
Education	0	2,015
Total	2,413	574,351

Table 3: Estimate of Damage within 0.9 Miles

Occupancy Type	Building Counts	Exposure (thousands of dollars)
Residential	6,590	1,319,027
Commercial	115	218,931
Industrial	9	28,020
Agriculture	0	1,296
Religious	2	12,143
Government	2	3,070
Education	0	4,414
Total	6,718	1,586,901

Table 4: Estimated Number of People Affected

Distance	Within 0.3 Miles	Within 0.9 Miles
Population	8,638	23,341

Essential Facilities Damage

Within 0.3 miles of this historical tornado path, there is one care facility, one fire station, and four schools. The name, address, and HAZUS ID of these facilities are provided in Table 5. Within the 0.3 to 0.9 miles, there is one emergency center, three fire stations, and eight schools. The name, address, and HAZUS ID of these facilities are provided in Table 6. Based on the Fujita-Pearson Number table, facilities located within 0.3 to 0.9 miles of this tornado path would be completely destroyed. The locations of these facilities in relation to the tornado path and width are depicted in Figure 3.

Table 5: Essential Facilities within 0.3 Miles of Historical Tornado Path

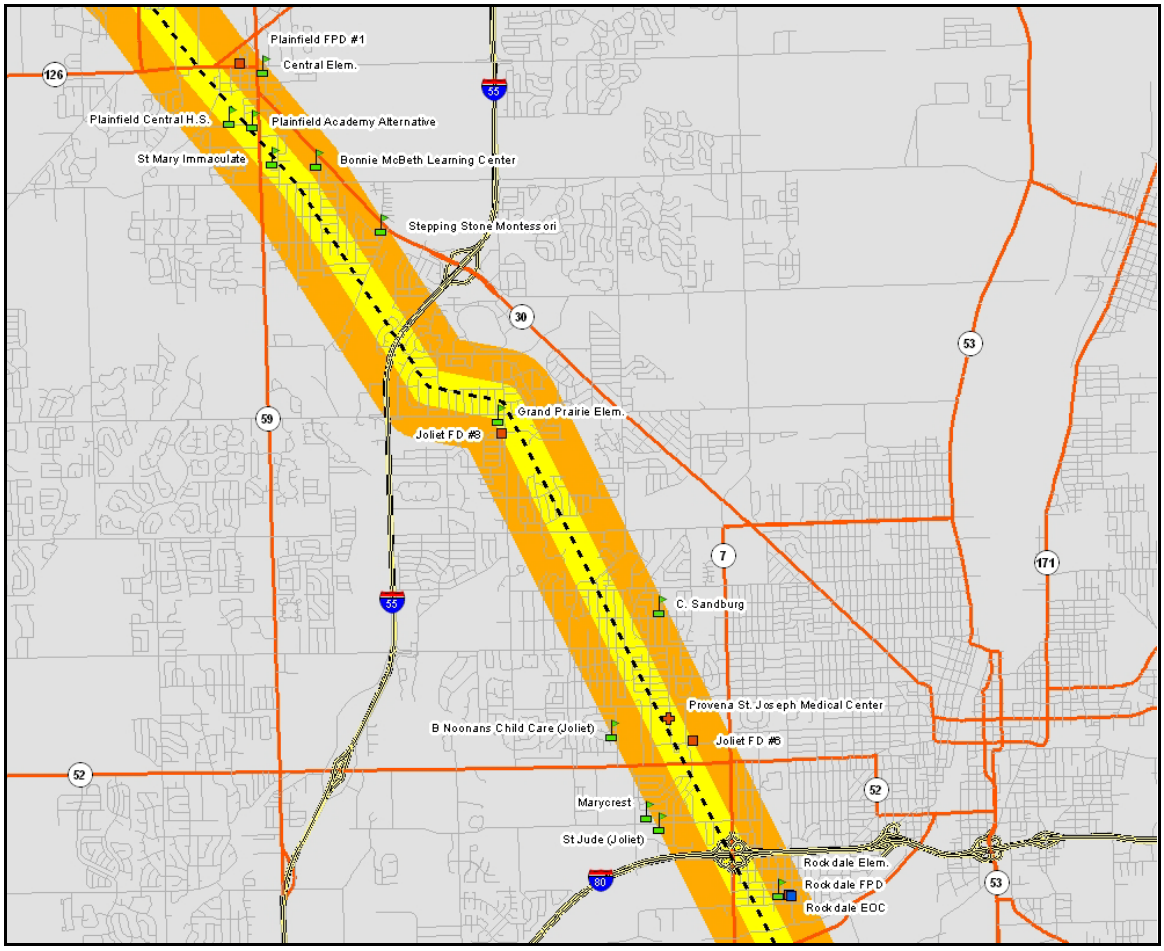
TYPE	NAME	ADDRESS	HAZUS_ID
Care Facilities	Provena St. Joseph Medical Center	333 N Madison St	IL000228
Fire Stations	Joliet FD #8	2293 Essington Rd	IL001058
Schools	Grand Prairie Elem.	3100 Caton Farm Rd	IL005373
Schools	Plainfield Academy Alternative	500 W Fort Beggs Dr	IL005392
Schools	Plainfield Central H.S.	611 W Fort Beggs Dr	IL005389
Schools	St Mary Immaculate	15629 S Route 59	IL005472

Table 6: Essential Facilities within 0.3 to 0.9 Miles of Historical Tornado Path

TYPE	NAME	ADDRESS	HAZUS_ID
Emergency Centers	Rockdale EOC	603 Otis Ave	IL000168
Fire Stations	Joliet FD #6	2049 Oneida St	IL001060
Fire Stations	Plainfield FPD #1	703 N Des Plaines St	IL001011
Fire Stations	Rockdale FPD	603 Otis Avenue	IL001012
Schools	B Noonans Child Care (Joliet)	2504 Fairway Dr	IL005441
Schools	Bonnie McBeth Learning Center	15730 Howard St	IL005377
Schools	C. Sandburg	1100 Lilac Lane	IL005313

Schools	Central Elem.	305 W Lockport St	IL005369
Schools	Marycrest	303 Purdue Ct	IL005309
Schools	Rockdale Elem.	715 Meadow Ave	IL005300
Schools	St Jude (Joliet)	2204 McDonough	IL005467
Schools	Stepping Stone Montessori	23145 W Lincoln Hwy	IL005479

Figure 3: Essential Facilities within Historical Tornado Path Buffer



Will County Earthquake Risk Assessment Results

Disclaimer:
The estimates of social and economic impacts contained in this report were produced using HAZUS loss estimation methodology software and which is based on current scientific and engineering knowledge. . There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific hazard. This analysis is intended to provide conceptual information that can be used to identify mitigation opportunities. These results can be improved by using enhanced inventory data and hazard information.

January 6, 2006

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The Polis Center
We bring things into perspective.

Introduction

The CTE team contacted Dr. Robert Bauer of the Illinois State Geological Survey (ISGS) to obtain existing geological information and recommendations for earthquake scenarios. Three earthquake scenarios were developed to provide a reasonable basis for earthquake planning in Will County.

These included one deterministic scenario based upon input from the ISGS. A deterministic scenario is based on a specific event without explicit consideration of the probability of its occurrence. The scenario for this study was based on the June 26, 1909 5.1 magnitude Aurora, Illinois (41.6N 88.1W) earthquake. According to the ISGS web site, this earthquake has been related to the La Salle anticline in the Illinois Basin. During the earthquake, many chimneys fell, a stove overturned, and gas line connections broke at Aurora. Several chimneys were downed at Forreston, Naperville, Streator, Triumph, and Troy Grove, and one fell at Waukegan. Brick walls cracked at Bloomington, and sidewalks cracked and many chimneys were damaged at Freeport. At Platteville, Wis., about 130 km northwest of Chicago, an old building was cracked; houses were jostled out of plumb at Beloit, Wisconsin about 240 km northwest of Chicago.

Additionally, the analysis included two different types of probabilistic scenarios. These types of scenarios are based on ground shaking parameters derived from U.S. Geological Survey probabilistic seismic hazard curves.

The first selected probabilistic scenario was a 500 year return period scenario. This scenario evaluates the average impacts of a multitude of possible earthquake epicenters with a magnitude that would be typical of that expected for a 500 year return period.

The second probabilistic scenario was one that allowed us to calculate an annualized loss. The annualized loss analysis in HAZUS-MH provides a means for averaging potential losses from future scenarios while considering their probabilities of occurrence. The HAZUS-MH earthquake model evaluates 8 different return period scenarios including those for the 100, 250, 500 750, 1000 1500, 2000, and 2500 year return period earthquake events. It then calculates the probabilities of these events as well as the interim events, calculates their associated losses, and sums these losses to calculate an annualized loss. These analysis options were chosen because they are useful for prioritization of seismic reduction measures and for simulating mitigation strategies.

Earthquake hazard modeling scenarios performed consisted of:

- A 5.3 magnitude earthquake in Aurora, Illinois (deterministic scenario)
- 500 year return period event (probabilistic scenario)
- Annualized Earthquake Loss (probabilistic scenario)

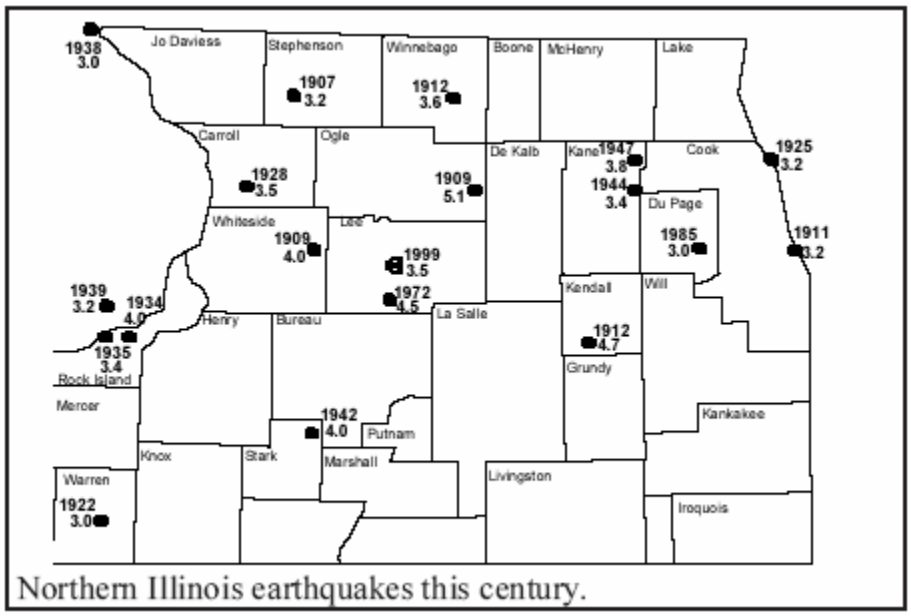
Review Existing Information

The ISGS team desires to model a large magnitude earthquake from the New Madrid fault in order to ascertain the potential impact on high rise structures in the Will County area. However, it was determined that such a model could not be run for the following reasons.

- First, HAZUS-MH will not model earthquakes whose epicenter occurs greater than 200 kilometers from the study region. While it is possible to provide ground motion maps to HAZUS which can then model the impact of such an earthquake event on the exposed inventory, such maps are not available for the Will County region at this time.
- Second, while this study did include updating of selected inventory components; additional detailed building data would be required to model these structures since the default HAZUS building mapping schemes assume all buildings are low-rise (1-3 stories) structures, distributed according to a default classification of structural materials (wood, concrete, steel, etc.) and designed to code. Because of the lack of detailed building data, HAZUS will likely assume greater damage to high rise structures than will realistically be produced given that it will assume that the maximum height of the structures is 3 stories and that the entire assumed exposure to the structures will be contained within that part of the structure

Given the limitations described above, the ISGS recommended modeling a magnitude 5.0- 5.5 earthquake at the location of a historic magnitude 5.1 epicenter in Aurora, Illinois that occurred in 1909. The coordinates of this earthquake were 41.6N 88.1W longitude as shown in the figure 1 below.

Figure1. Earthquakes in Northern Illinois



Analysis

To model a deterministic scenario, such as the historical event based in Aurora, Illinois, the user must input a variety of parameters. The parameters include the following:

One of the most critical sources of information that is required for accurate assessment of earthquake risk is soils. Unfortunately, NEHRP (National Earthquake Hazards Reduction Program) soil classification maps only exist for the southern portion of Illinois. NEHRP soil classifications portray the degree of

shear-wave amplification that can occur during ground shaking. Because of the lack of soils data, the analysis used a default scenario with D class soils.

Dr. Bauer indicated that Will County and the surrounding area do not have a map for liquefaction potential that could be used by HAZUS-MH. However, according to literature, historical (moment magnitude 5.1-5.5) earthquakes should not generate liquefaction and therefore it was determined that no additional effort would be put forth to assess liquefaction potential for this study.

Will County has seasonal water table depths of 2 to 3 meters. These probably should not matter since liquefaction should not be expected with earthquake magnitudes below magnitudes of about 6.5. For the analysis we used a depth to water table of 3 meters. ISGS recommended an earthquake depth of 5.0 kilometers for the deterministic Aurora earthquake. The historical earthquake depths identified by ISGS ranged from 5 to 10 km.

HAZUS-MH also requires the user to define an attenuation (amplitude of the waves) function unless ground motion maps are supplied. Because Will County has experienced smaller earthquakes, ISGS made the decision to use the Toro et al. (1997) attenuation function for calculation of ground motion.

Assumptions:

The probabilistic analysis and the annualized loss analysis do not require user input of the variables listed above. The assumptions of the annualized loss analysis are as follows:

- Census tract-based analyses with the assumption that all aggregate inventory is concentrated at the centroid of the census tract for purposes of performing loss analysis
- HAZUS uses USGS probabilistic hazard maps
- Default soft soil (NEHRP Class D) conditions
- No ground failure effects
- 2000 demographic information
- 2002 square footage data for building occupancies
- 2002 Means Data for Building Replacement Cost
- Building-related economic losses only. Losses to lifelines not included Long term or indirect losses not considered

HAZUS-MH is a planning tool. The application is not intended as a substitute for detailed engineering analysis. The estimates of social and economic impacts contained in this report were produced using HAZUS loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a

specific hazard event. These results can be improved by using enhanced inventory data and hazard information.

5.3 Magnitude with an Epicenter in Aurora, Illinois

HAZUS-MH Earthquake Risk Module provides estimates of damage and loss to buildings, essential facilities, transportation and utility lifelines, and population based on scenario or probabilistic earthquakes. In addition, the Earthquake Risk Module estimates the debris generated, fire, casualties, and shelter requirements following the disaster. Based on consultation with the Illinois State Geologic Survey, the May 26, 1909 5.1 magnitude earthquake that occurred in near Aurora, Illinois is the best scenario to model with the limitations on available data.

Results:

The results of the initial analysis, the 5.3 magnitude Earthquake with an Epicenter in Aurora, Illinois are depicted in Table 1 and 2 and Figure 1. Table 1 identifies the calculated number of damaged buildings by general occupancy classification. HAZUS estimates that about 12,369 buildings will be at least moderately damaged. This is over 8.00 % of the total number of buildings in the region. There are an estimated 405 buildings that will be damaged beyond repair.

Table 2 represents building economic losses in millions of dollars. The losses include capital losses as well as income losses. A description of the losses is included in the table. The total building-related losses were 1,137.82 (millions of dollars); 6 % of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 81 % of the total loss.

Figure 1 represents the building economic losses by census tracts in thousands of dollars. Analysis of this figure indicates that the most substantial damage would occur in the north part of the county. This is consistent with the area that is currently developed in the county.

Essential Facility Losses Aurora Event

The HAZUS analysis calculated no essential facility losses for this event. Essential facilities include police stations, fire stations, schools, medical care facilities, and emergency operation centers and are analyzed on a site by site basis.

Table 1 Aurora, Illinois Earthquake 5.3 Magnitude Building Count Damages by Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	701	0.62	164	0.67	106	1.07	30	1.42	4	1.08
Education	14	0.01	3	0.01	2	0.02	1	0.03	0	0.03
Government	27	0.02	5	0.02	4	0.04	1	0.04	0	0.04
Industrial	181	0.16	33	0.13	24	0.24	7	0.33	1	0.18
Other Residential	4,828	4.30	1,034	4.22	518	5.25	90	4.28	15	3.63
Religion	24	0.02	6	0.02	4	0.04	1	0.06	0	0.05
Single Family	106,419	94.85	23,279	94.92	9,206	93.33	1,971	93.85	385	94.99
Total	**112,195**		**24,525**		**9,864**		**2,100**		**405**	

Table 2 Aurora, Illinois Earthquake 5.3 Magnitude Building Economic losses in Millions of Dollars

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
Income Loses							
	Wage	0.00	0.67	13.01	0.68	0.88	15.24
	Capital-Related	0.00	0.29	11.39	0.41	0.26	12.34
	Rental	17.63	8.43	7.78	0.24	0.31	34.39
	Relocation	1.82	0.19	0.43	0.02	0.12	2.58
	Subtotal	**19.45**	**9.58**	**32.61**	**1.36**	**1.56**	**64.55**
Capital Stock Loses							
	Structural	110.65	12.47	19.15	3.58	2.77	148.61
	Non_Structural	464.50	81.47	57.50	16.70	10.38	630.56
	Content	200.61	27.78	40.27	12.71	8.34	289.70
	Inventory	0.00	0.00	1.70	2.63	0.08	4.41
	Subtotal	**775.76**	**121.72**	**118.61**	**35.62**	**21.57**	**1,073.27**
	Total	**795.20**	**131.29**	**151.22**	**36.98**	**23.13**	**1,137.82**

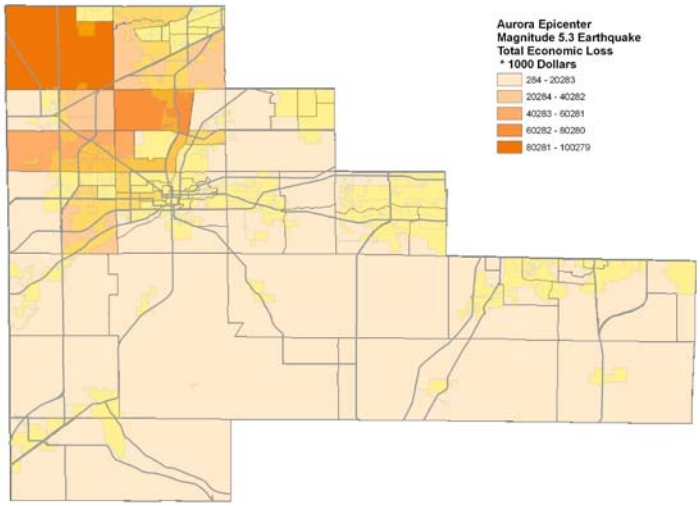
***Income Losses (see above table)**

Wage losses (consistent with income loss)
Capital-related income losses (a measure of the loss of productivity, services or sales)
Rental income losses (to building owners)
Relocation expenses (for businesses and institutions)

*** Capital Stock Losses (see above table)**

Structural losses (structural repair costs for damaged and destroyed buildings)
Non_structural Losses (non structural repair costs for damaged and destroyed buildings)
Content Losses (Costs of damage to building contents)
Inventory losses (Losses of building inventory contents related to business activities)

Figure 1. Aurora Earthquake 5.3 Magnitude Building Economic losses in Thousands of Dollars



500 Year Probabilistic Event

HAZUS-MH Earthquake Risk Module provides estimates of damage and loss to buildings, essential facilities, transportation and utility lifelines, and population based on scenario or probabilistic earthquakes. In addition, the Earthquake Risk Module estimates the debris generated, fire, casualties, and shelter requirements following the disaster. This scenario evaluates the average impacts of a multitude of possible earthquake epicenters with a magnitude that would be typical of that expected for a 500 year return period.

Results:

The results of the 500 year probabilistic analysis are depicted in Table 3 and 4 and Figure 2. Table 3 identifies the calculated number of damaged buildings by general occupancy classification. HAZUS estimates that about 1,524 buildings will be at least moderately damaged. This is over 1.00 % of the total number of buildings in the region. There are an estimated 18 buildings that will be damaged beyond repair.

Table 4 represents building economic losses in millions of dollars. The losses include capital losses as well as income losses. A description of the losses is included in the table. The total building-related losses were 66.46 (millions of dollars); 12 % of the estimated losses were related to the business interruption of the region.

Figure 2 represents the building economic losses by census tracts in thousands of dollars. Analysis of this figure indicates that the majority of damage is predicted to occur in only one census tract in the far northwest part of the county

Essential Facility Losses 2500 Year Probabilistic Event

The HAZUS analysis calculated no essential facilities losses for this event

Table 3. 500 Year Probabilistic Building Count Damages by Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	934	0.65	48	1.04	18	1.40	3	1.52	0	1.02
Education	19	0.01	1	0.02	0	0.03	0	0.03	0	0.03
Government	35	0.02	2	0.04	1	0.05	0	0.05	0	0.05
Industrial	228	0.16	12	0.26	5	0.38	1	0.41	0	0.16
Other Residential	6,013	4.21	340	7.35	124	9.41	8	4.05	1	2.65
Religion	33	0.02	2	0.04	1	0.05	0	0.06	0	0.05
Single Family	135,673	94.92	4,224	91.26	1,168	88.68	175	93.88	18	96.04
Total	**142,936**		**4,629**		**1,318**		**187**		**19**	

Table 4. 500 Year Probabilistic Building Economic losses in Millions of Dollars

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
Income Loses							
	Wage	0.00	0.09	1.69	0.12	0.14	2.04
	Capital-Related	0.00	0.04	1.49	0.07	0.04	1.64
	Rental	1.88	0.78	0.97	0.03	0.03	3.69
	Relocation	0.19	0.02	0.06	0.00	0.02	0.28
	Subtotal	**2.07**	**0.92**	**4.21**	**0.22**	**0.23**	**7.65**
Capital Stock Loses							
	Structural	12.58	1.36	2.56	0.60	0.42	17.52
	Non_Structural	25.45	3.52	3.21	0.89	0.73	33.79
	Content	4.69	0.58	1.25	0.52	0.29	7.34
	Inventory	0.00	0.00	0.05	0.11	0.00	0.17
	Subtotal	**42.72**	**5.45**	**7.07**	**2.13**	**1.43**	**58.82**
	Total	**44.79**	**6.37**	**11.29**	**2.35**	**1.66**	**66.46**

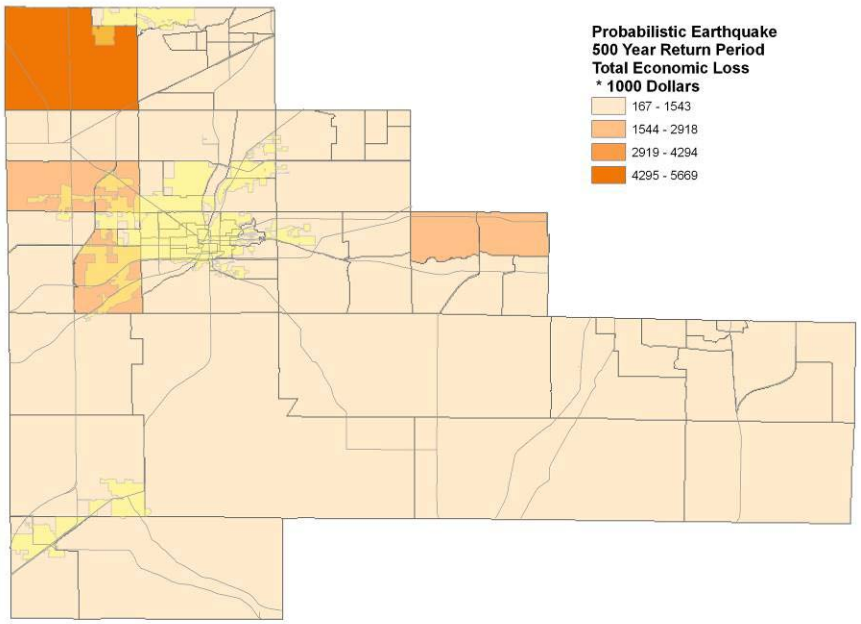
*** Income Losses (see above table)**

Wage losses (consistent with income loss)
Capital-related income losses (a measure of the loss of productivity, services or sales)
Rental income losses (to building owners)
Relocation expenses (for businesses and institutions)

***Capital Stock Losses (see above table)**

Structural losses (structural repair costs for damaged and destroyed buildings)
Non_structural Losses (non structural repair costs for damaged and destroyed buildings)
Content Losses (Costs of damage to building contents)
Inventory losses (Losses of building inventory contents related to business activities)

Figure 2. 500 year Probabilistic Building Economic losses in Thousands of Dollars



Annualized Loss

HAZUS-MH Earthquake Risk Module provides estimates of damage and loss to buildings, essential facilities, transportation and utility lifelines, and population based on scenario or probabilistic earthquakes. In addition, the Earthquake Risk Module estimates the debris generated, fire, casualties, and shelter requirements following the disaster. The annualized loss analysis in HAZUS-MH provides a means for averaging potential losses from future scenarios while considering their probabilities of occurrence. The HAZUS-MH earthquake model evaluates 8 different return period scenarios including those for the 100, 250, 500 750, 1000 1500, 2000, and 2500 year return period earthquake events. It then calculates the probabilities of these events as well as the interim events, calculates their associated losses, and sums these losses to calculate an annualized loss.

Results:

The results of the annualized analysis are depicted in Table 5 and 6 and Figure 3. Table 5 indicates identifies the average annual estimated number of buildings at risk to be damaged by general occupancy classification. HAZUS estimates that about 1,202 buildings will be at least moderately damaged. This is over 1.00 % of the total number of buildings in the region. There are an estimated 1 buildings that will be damaged beyond repair.

Table 6 identifies the average annual estimated economic risk in millions of dollars. The risk includes capital losses as well as income losses. A description of the

losses is included in the table. The total building-related losses were 0.25 (millions of dollars); 27 % of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 55 % of the total loss.

Figure 3 represents the average annual estimated building economic risk by census tracts in thousands of dollars. As expected the losses reflect the same distribution as the 500 year probabilistic analysis.

Essential Facility Losses Annualized

The HAZUS analysis calculated no essential facility losses for this event.

Table 5. Annualized Building Count Damages by Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	224	0.16	0	0.00	0	0.00	0	0.00	0	0.00
Education	3	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	2	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	29	0.02	0	0.00	0	0.00	0	0.00	0	0.00
Other Residential	5,625	3.98	222	5.18	72	6.56	0	0.00	0	0.00
Religion	2	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Single Family	135,508	95.84	4,061	94.82	1,025	93.44	104	100.00	1	00.00
Total	**141,393**		**4,283**		**1,097**		**104**		**1**	

Table 6. Annualized Building Economic losses in Millions of Dollars

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
Income Loses							
	Wage	0.00	0.00	0.03	0.00	0.00	0.03
	Capital-Related	0.00	0.00	0.02	0.00	0.00	0.02
	Rental	0.01	0.00	0.00	0.00	0.00	0.01
	Relocation	0.00	0.00	0.00	0.00	0.00	0.00
	Subtotal	**0.01**	**0.00**	**0.05**	**0.00**	**0.00**	**0.07**
Capital Stock Loses							
	Structural	0.11	0.01	0.04	0.01	0.01	0.18
	Non_Structural	0.00	0.00	0.00	0.00	0.00	0.00
	Content	0.00	0.00	0.00	0.00	0.00	0.00
	Inventory	0.00	0.00	0.00	0.00	0.00	0.00
	Subtotal	**0.11**	**0.01**	**0.04**	**0.01**	**0.01**	**0.18**
	Total	**0.12**	**0.02**	**0.09**	**0.01**	**0.01**	**0.25**

*** Income Losses (see above table)**
Wage losses (consistent with income loss)
Capital-related income losses (a measure of the loss of productivity, services or sales)
Rental income losses (to building owners)
Relocation expenses (for businesses and institutions)

***Capital Stock Losses (see above table)**
Structural losses (structural repair costs for damaged and destroyed buildings)
Non_structural Losses (non structural repair costs for damaged and destroyed buildings)
Content Losses (Costs of damage to building contents)
Inventory losses (Losses of building inventory contents related to business activities)

Figure 3. Annualized Building Economic losses in Thousands of Dollars

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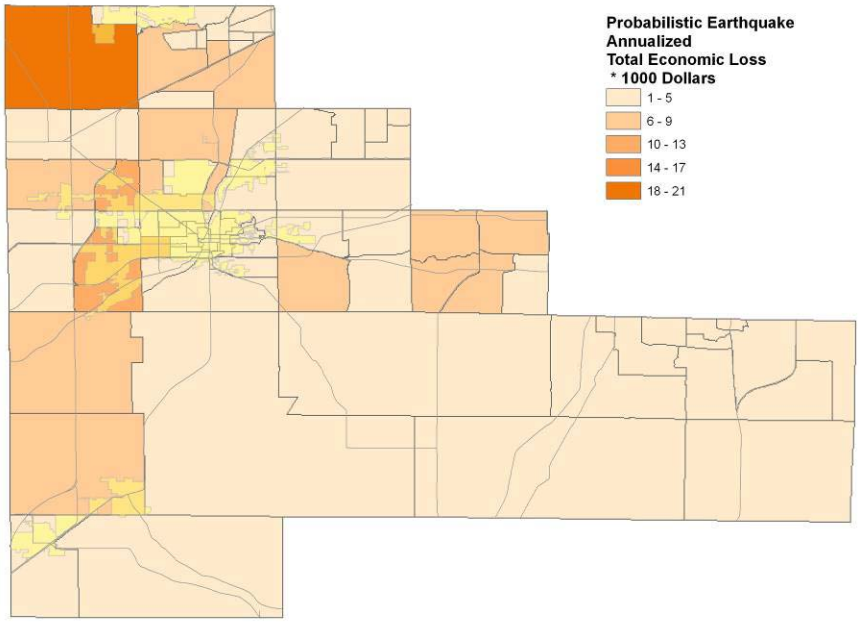

Will County Hazard Risk Assessment
Hazardous Materials Results (Arsenal Rd & I-55)

Disclaimer:
The estimates of social and economic impacts contained in this report were produced using limited GIS and HAZUS loss estimation data. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific hazard. This analysis is intended to provide conceptual information that can be used to identify mitigation opportunities. These results can be improved by using enhanced inventory data and hazard information.

December 20, 2005

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The Polis Center
We bring things into perspective.

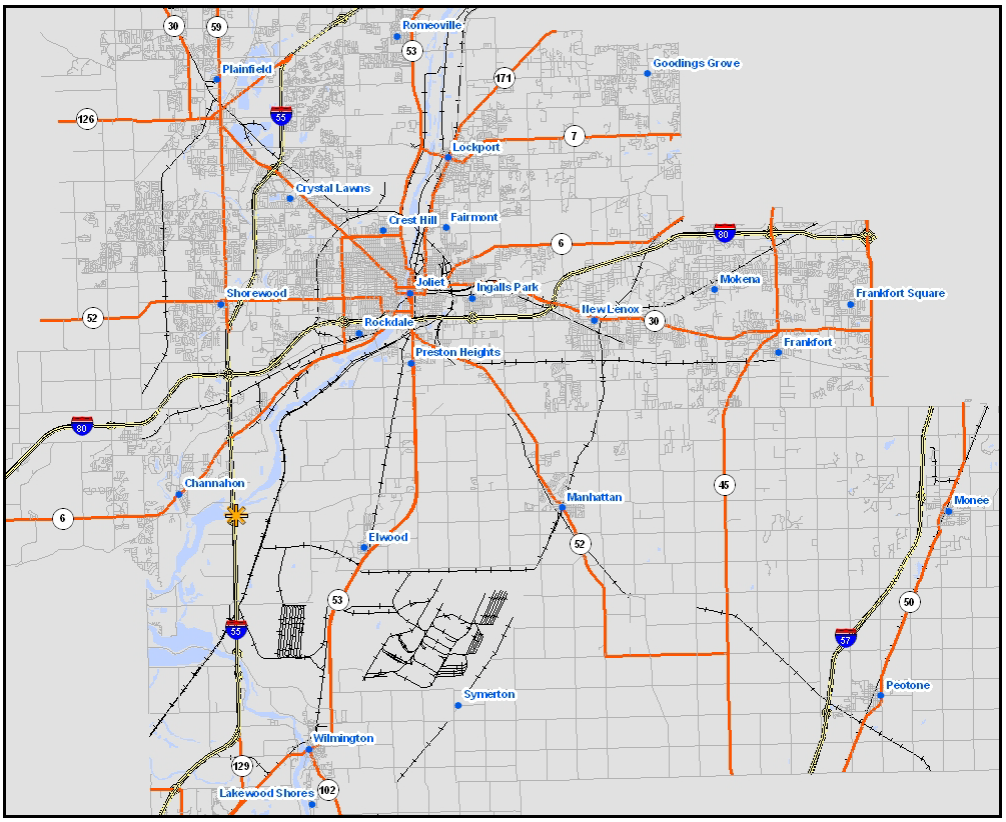
Hazardous Materials (Arsenal Rd & I-55)

The U.S. EPA's ALOHA (Areal Locations of Hazardous Atmospheres) model was utilized to assess the area of impact for a chlorine release near a large industrial facility located southwest of Joliet near Arsenal Road and Interstate 55. ALOHA is a computer program designed especially for use by people responding to chemical accidents, as well as for emergency planning and training. Chlorine is a common chemical used in industrial operations that can be found in either liquid or gas form. Rail, truck tankers, and barges commonly haul chlorine, as well as other hazardous materials, to and from facilities. For this scenario, moderate atmospheric and climatic conditions with a slight breeze from the west were assumed. The target area of Arsenal Rd and I-55 was chosen due to its large industrial facilities, rail and truck hubs, and the presence of a large number of large quantity hazardous material generators.

Review Existing Information

The 2000 Census Block boundaries and population figures, as well as the values for building counts and building replacement cost were extracted from the HAZUS-MH provided inventory. The geographic area covered in this analysis is depicted in Figure 1.

Figure 1: Location of Chlorine Release



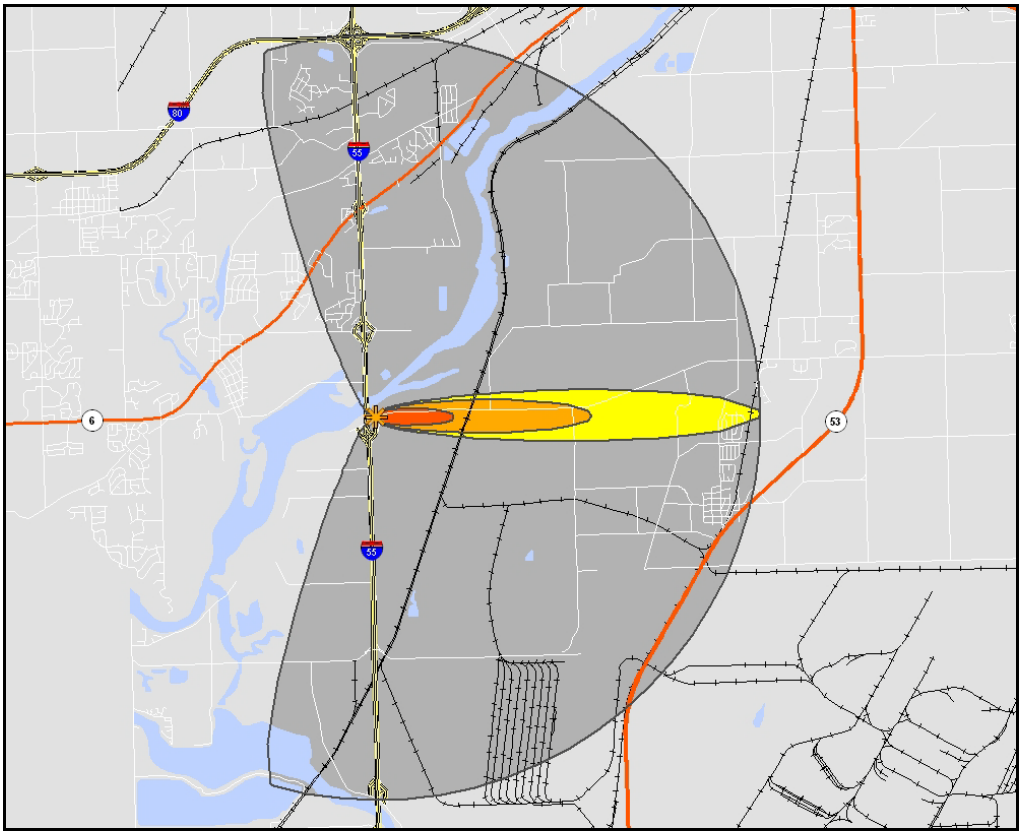
Analysis

In terms of the atmospheric conditions, ALOHA was setup with a wind speed of 5 mph at a westerly direction. The temperature was set for 68° F with a medium level of humidity and partly cloudy skies.

In terms of the source conditions, a horizontal, cylindrical-shaped tank was selected. The diameter of the tank was set to 9 feet. The length of the tank was set to 66 feet. These settings created a tank with a volume of 31,409 gallons. At the time of this release, the tank was estimated to be 80% full. The chlorine in this tank is in its liquid state. This release was based on a leak from a hole, a little less than ½" in diameter and 12 inches above the bottom of the tank.

Using the settings above, approximately 20,450 pounds of material would be released. The image in Figure 2 depicts the plume footprint generated by ALOHA. As the substance moves away from the source, the level of concentration of that substance decreases. Each color-coded area depicts a level of concentration. These concentrations are measured in parts per million, or ppm.

Figure 2: Plume Footprint Generated by ALOHA



The area in red, at 20 ppm, would extend no more than 1,647 yards out from the point of release. The area in orange, at 3 ppm, would extend no more than 2.6 miles out from the point of release. The area in yellow, at 1 ppm, would extend no more than 4.6 miles out from the point of release. The gray area depicts what ALOHA refers to as "uncertainty lines", which means that within the confines of the entire plume footprint, the ALOHA model is 95% confident that the release will stay within this boundary.

The 2000 Census Block layer was added to ArcMap and overlaid with the plume footprint. The 2000 Census Block layer was then clipped against each of the four footprint areas. Clipping could be defined as the process of extracting features from one layer, in this case the 2000 Census Block layer, based on the boundary of another layer, in this case one of the four footprint areas. Figures 3 and 4 depict the 2000 Census Block areas before and after the "clipping" process.

Figure 3: The 2000 Census Block Areas before the "Clipping" Process

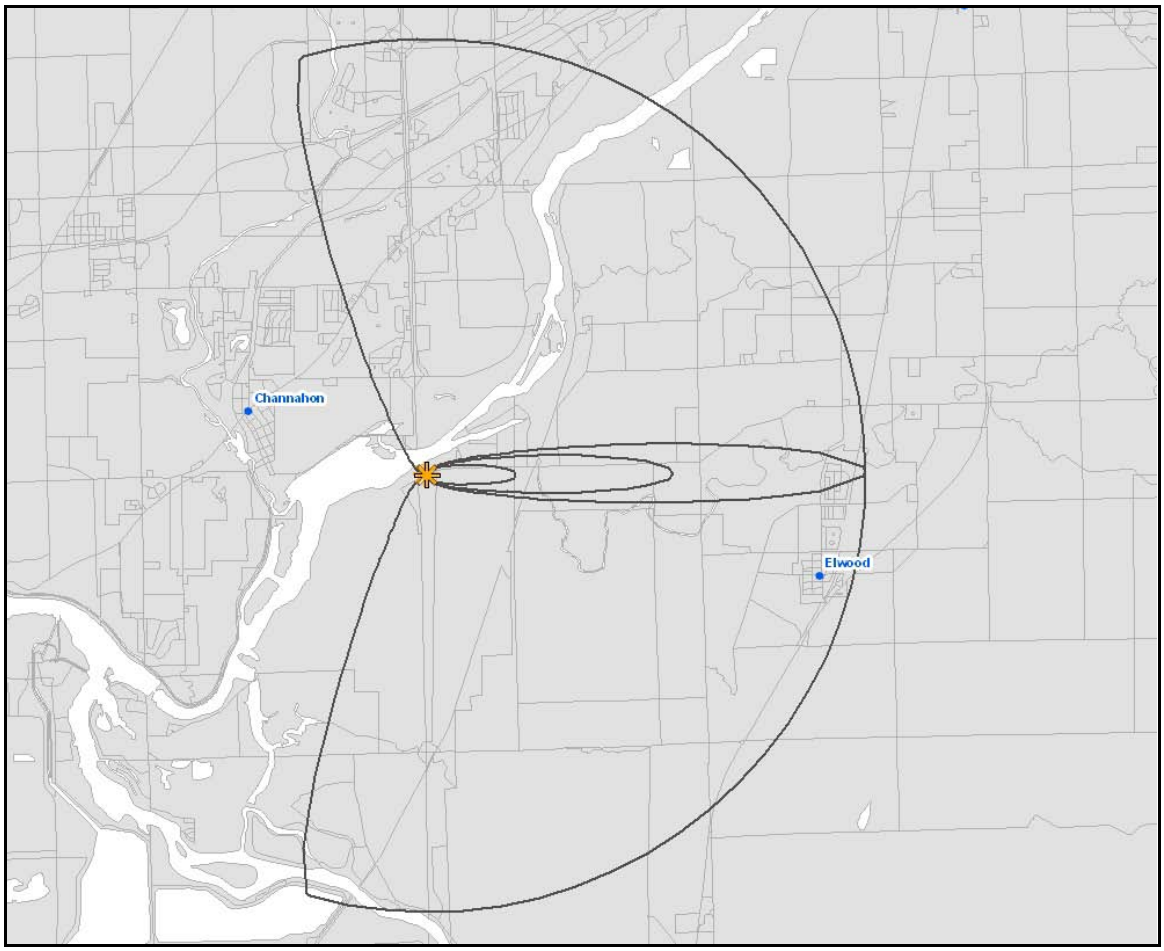
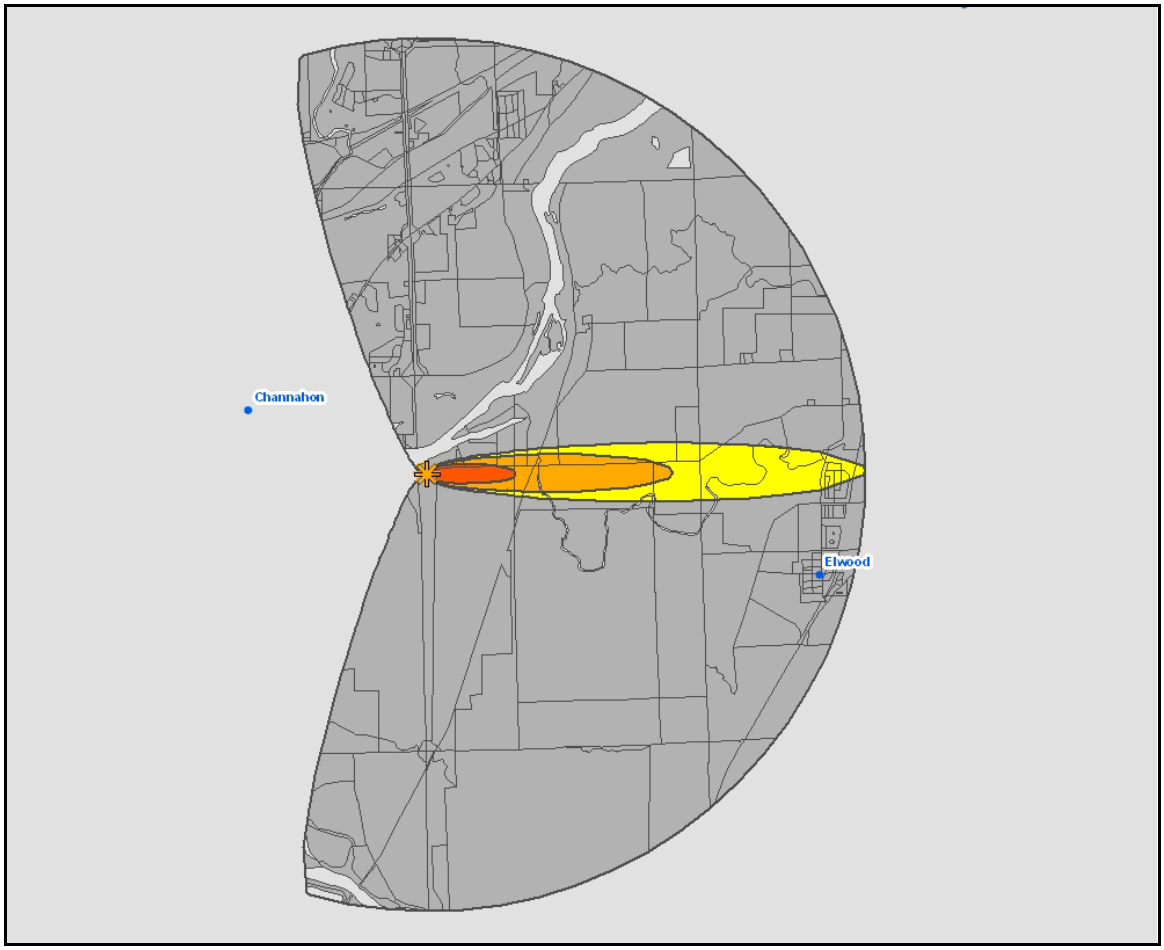


Figure 4: The 2000 Census Block Areas after the "Clipping" Process



A field was added to the table to denote the percentage of each Census Block that fell inside each of the four footprint areas. To populate this field, the area of each clipped Census Block was divided by the area of the original Census Block. The percentages were then multiplied by the building count and exposure values.

Assumptions:

- For this analysis it was assumed that all buildings and population were evenly distributed across each census block. Thus, if 50% of a census block fell within the buffer area, it was assumed that 50% of the structures and population also fell within that area.

Results

By summarizing the results of each of the four footprint areas, the GIS analysis estimates that as many as 1,783 buildings could be exposed. The inventory data upon which these estimates are based was obtained from the HAZUS-MH provided dataset. This dataset was compiled through a combination of 2000 Census data and information compiled by Dun and Bradstreet for the HAZUS-MH application. Based on population figures from the 2000 Census, approximately 5,427 people would be affected.

As noted earlier, it is important to note that these estimates are based on an area weighted analysis. In this analysis it was assumed that all buildings were evenly distributed across each census block. Thus, if 50% of a census block fell within the buffer area, it was assumed that 50% of the structures and population also fell within that area. In reality, the actual number of buildings could be much higher or lower than estimated.

The results of the analysis are depicted in Tables 1 through 6. Table 1 summarizes the results of the four footprint areas in terms of buildings counts and replacement costs. Table 2 summarizes the results of the four footprint areas in terms of population. Tables 3 through 6 depict the results for each of the four footprint areas.

Table 1: Estimated Number of Buildings Exposed and Replacement Cost (Total)

Occupancy Type	Building Counts	Exposure (thousands)
Residential	1,771	292,350
Commercial	9	21,360
Industrial	3	13,549
Agriculture	0	263
Religious	0	1,965
Government	0	99
Education	0	0
Total	1,783	329,586

Table 2: Estimated Population (By Area and Total)

Plume Area	Population
Red	0
Orange	0
Yellow	155
Gray	5,272
Total	5,427

Table 3: Estimated Number of Buildings Exposed and Replacement Cost (Red Area)

Occupancy Type	Building Counts	Exposure (thousands)
Residential	0	13
Commercial	0	228
Industrial	0	0
Agriculture	0	0
Religious	0	0
Government	0	0
Education	0	0
Total	0	241

Table 4: Estimated Number of Buildings Exposed and Replacement Cost (Orange Area)

Occupancy Type	Building Counts	Exposure (thousands)
Residential	0	6
Commercial	0	101
Industrial	0	0
Agriculture	0	0
Religious	0	0
Government	0	0
Education	0	0
Total	0	107

Table 5: Estimated Number of Buildings Exposed and Replacement Cost (Yellow Area)

Occupancy Type	Building Counts	Exposure (thousands)
Residential	43	6,495
Commercial	0	135
Industrial	0	134
Agriculture	0	42
Religious	0	0
Government	0	0
Education	0	0
Total	43	6,806

Table 6: Estimated Number of Buildings Exposed and Replacement Cost (Gray Area)

Occupancy Type	Building Counts	Exposure (thousands)
Residential	1,728	285,836
Commercial	9	20,896
Industrial	3	13,415
Agriculture	0	221
Religious	0	1,965
Government	0	99
Education	0	0
Total	1,740	322,432

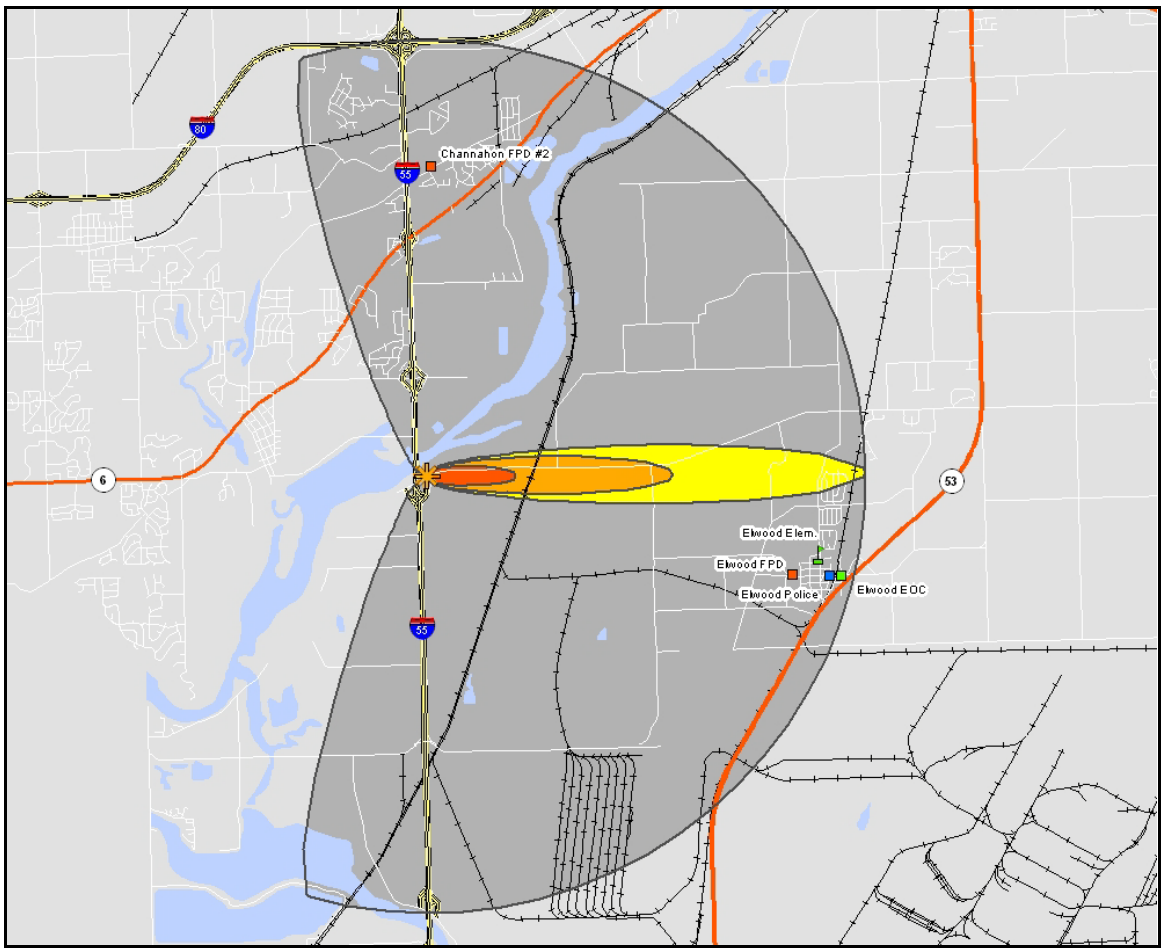
Essential Facilities Damage

Fortunately, in this scenario, there are no essential facilities that fall within any of the concentration areas (i.e., the red, orange, or yellow areas); all of the affected essential facilities fall within the confines of the confidence boundary. Within this area, there is one emergency center, two fire stations, one police station, and one school. The affected facilities are identified in Table 7. Their geographic locations are depicted in Figure 5.

Table 7: Essential Facilities within Plume Footprint

TYPE	NAME	ADDRESS	HAZUS_ID
Emergency Centers	Elwood EOC	309 W Mississippi St	IL000156
Police Stations	Elwood Police	201 E Mississippi Ave	IL000873
Fire Stations	Channahon FPD #2	23341 W McClintock Rd	IL001030
Fire Stations	Elwood FPD	309 W Mississippi St	IL001057
Schools	Elwood Elem.	409 N Chicago Ave	IL005393

Figure 5: Essential Facilities within Plume Footprint



Will County Hazard Risk Assessment
Hazardous Materials Results (Barge)

Disclaimer:
The estimates of social and economic impacts contained in this report were produced using limited GIS and HAZUS loss estimation data. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific hazard. This analysis is intended to provide conceptual information that can be used to identify mitigation opportunities. These results can be improved by using enhanced inventory data and hazard information.

January 9, 2006

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We bring things into perspective.

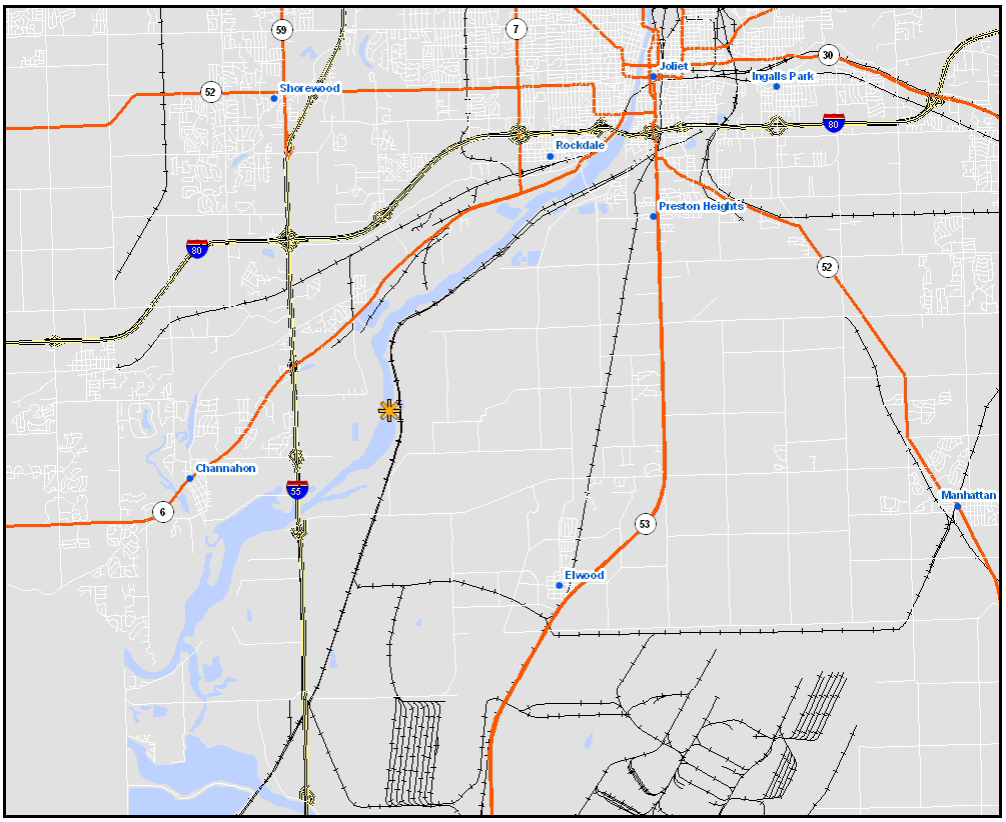
Hazardous Materials (Barge)

The U.S. EPA's ALOHA (Arial Locations of Hazardous Atmospheres) model was utilized to assess the area of impact for a chlorine release from a barge traveling on the Des Plaines River near US Route 6 and I-55. ALOHA is a computer program designed especially for use by people responding to chemical accidents, as well as for emergency planning and training. Chlorine is a common chemical used in industrial operations that can be found in either liquid or gas form. Rail, truck tankers, and barges commonly haul chlorine, as well as other hazardous materials, to and from facilities. For this scenario, moderate atmospheric and climatic conditions with a slight breeze from the west were assumed. The target area of the US Route 6, I-55, and the Des Plaines River was chosen due to its heavy barge traffic, large rail and truck hubs, as well as the presence of a large number of large quantity hazardous material generators.

Review Existing Information

The 2000 Census Block boundaries and population figures, as well as the values for building counts and building replacement cost were extracted from the HAZUS-MH provided inventory. The geographic area covered in this analysis is depicted in Figure 1.

Figure 1: Location of Chlorine Release

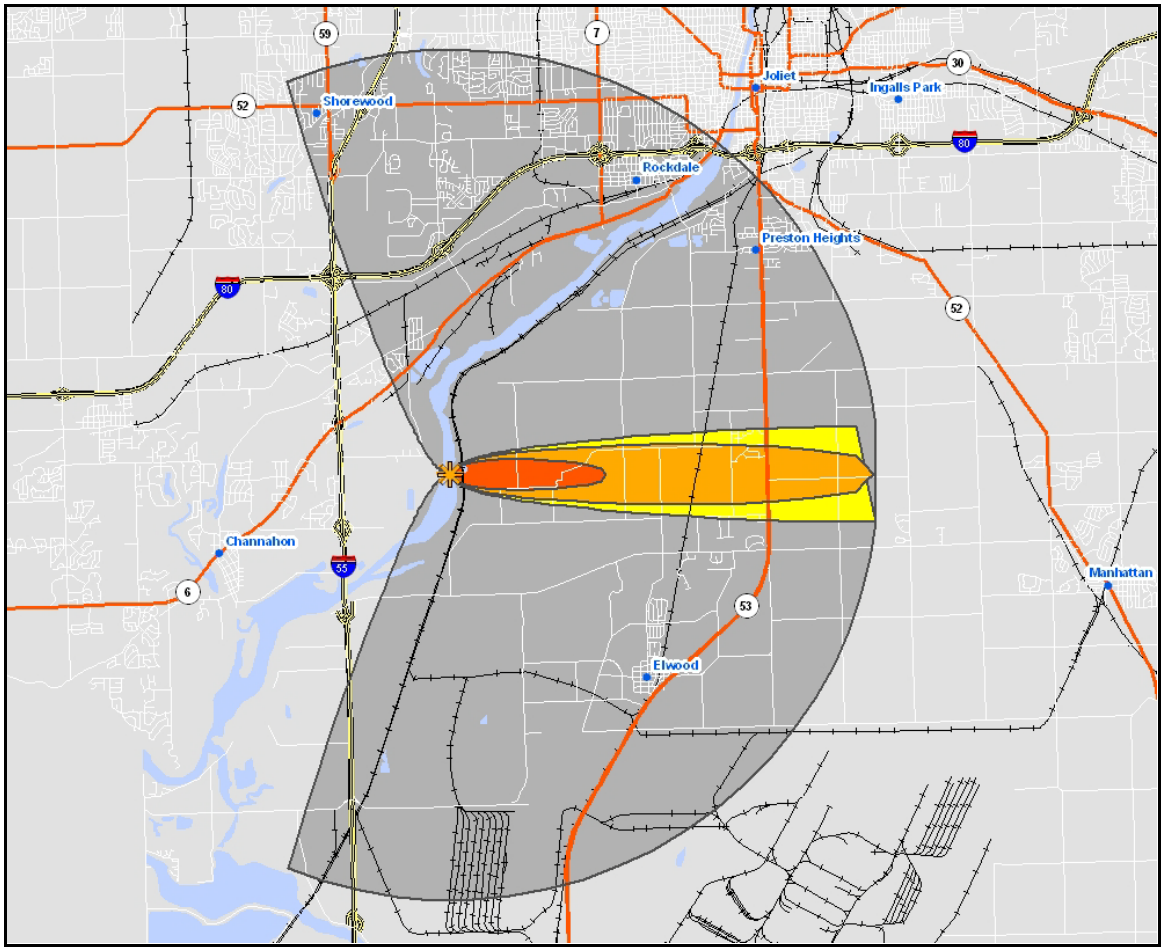


Analysis

In terms of the atmospheric conditions, ALOHA was setup with a wind speed of 5 mph at a westerly direction. The temperature was set for 68° F with a medium level of humidity and partly cloudy skies.

This scenario was setup as a direct release at a rate of 50 tons per hour for a period (i.e., duration) of 60 minutes. The source height for this release was set to 0. Using these settings, approximately 100,000 pounds of material would be released at a rate of 1,670 pounds per minute. The image in Figure 2 depicts the plume footprint generated by ALOHA. As the substance moves away from the source, the level of concentration of that substance decreases. Each color-coded area depicts a level of concentration. These concentrations are measured in parts per million, or ppm.

Figure 2: Plume Footprint Generated by ALOHA



The area in red, at 20 ppm, would extend no more than 2.2 miles out from the point of release. The area in orange, at 3 ppm, would extend no more than 6 miles out from the point of release. The area in yellow, at 1 ppm, would extend more than 6 miles out from the point of release. The gray area depicts what ALOHA refers to as "uncertainty lines", which means that within the confines of the entire plume footprint, the ALOHA model is 95% confident that the release will stay within this boundary.

The 2000 Census Block layer was added to ArcMap and overlaid with the plume footprint. The 2000 Census Block layer was then clipped against each of the four footprint areas. Clipping could be defined as the process of extracting features from one layer, in this case the 2000 Census Block layer, based on the boundary of another layer, in this case one of the four footprint areas. Figures 3 and 4 depict the 2000 Census Block areas before and after the "clipping" process.

Figure 3: The 2000 Census Block Areas before the "Clipping" Process

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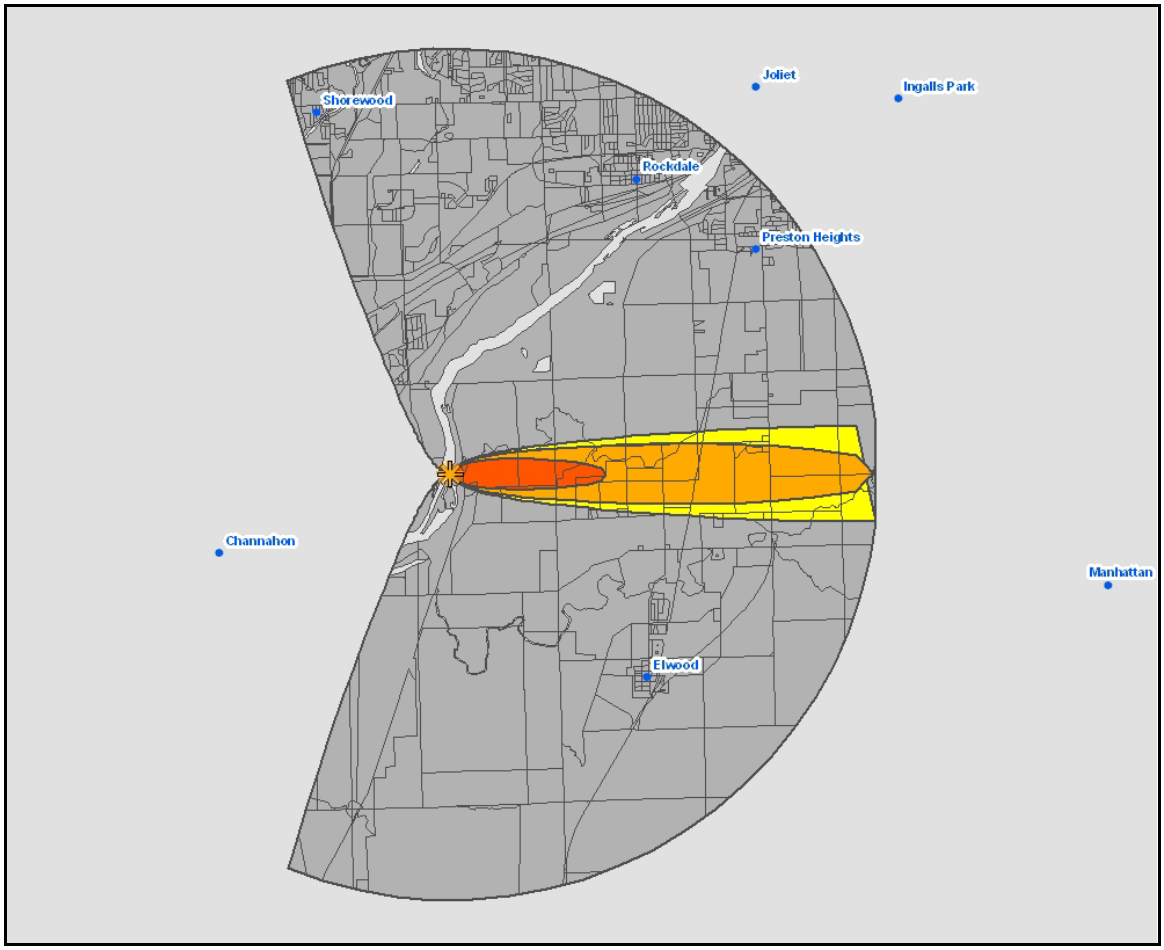


A field was added to the table to denote the percentage of each Census Block that fell inside each of the four footprint areas. To populate this field, the area of each clipped Census Block was divided by the area of the original Census Block. The percentages were then multiplied by the building count and exposure values.

Assumptions:

- For this analysis it was assumed that all buildings and population were evenly distributed across each census block. Thus, if 50% of a census block fell within the buffer area, it was assumed that 50% of the structures and population also fell within that area.

Results

By summarizing the results of each of the four footprint areas, the GIS analysis estimates that as many as 8,205 buildings could be exposed. The inventory data upon which these estimates are based was obtained from the HAZUS-MH provided dataset. This dataset was compiled through a combination of 2000 Census data and information

compiled by Dun and Bradstreet for the HAZUS-MH application. Based on population figures from the 2000 Census, approximately 27,722 people would be affected.

As noted earlier, it is important to note that these estimates are based on an area weighted analysis. In this analysis it was assumed that all buildings were evenly distributed across each census block. Thus, if 50% of a census block fell within the buffer area, it was assumed that 50% of the structures and population also fell within that area. In reality, the actual number of buildings could be much higher or lower than estimated.

The results of the analysis are depicted in Tables 1 through 6. Table 1 summarizes the results of the four footprint areas in terms of buildings counts and replacement costs. Table 2 summarizes the results of the four footprint areas in terms of population. Tables 3 through 6 depict the results for each of the four footprint areas.

Table 1: Estimated Number of Buildings Exposed and Replacement Cost (Total)

Occupancy Type	Building Counts	Exposure (thousands)
Residential	8,024	1,545,565
Commercial	144	386,566
Industrial	13	51,382
Agriculture	0	1,954
Religious	4	15,049
Government	10	11,965
Education	10	69,448
Total	8,205	2,081,929

Table 2: Estimated Population (By Area and Total)

Plume Area	Population
Red	18
Orange	288
Yellow	180
Gray	27,236
Total	27,722

Table 3: Estimated Number of Buildings Exposed and Replacement Cost (Red Area)

Occupancy Type	Building Counts	Exposure (thousands)
Residential	6	1,093
Commercial	0	0
Industrial	0	0
Agriculture	0	0
Religious	0	0
Government	0	0
Education	0	0
Total	6	1,093

Table 4: Estimated Number of Buildings Exposed and Replacement Cost (Orange Area)

Occupancy Type	Building Counts	Exposure (thousands)
Residential	95	16,090
Commercial	0	818
Industrial	0	786
Agriculture	0	47
Religious	0	0
Government	0	0
Education	0	0
Total	95	17,741

Table 5: Estimated Number of Buildings Exposed and Replacement Cost (Yellow Area)

Occupancy Type	Building Counts	Exposure (thousands)
Residential	59	10,139
Commercial	0	446
Industrial	0	287
Agriculture	0	39
Religious	0	0
Government	0	0
Education	0	0
Total	59	10,911

Table 6: Estimated Number of Buildings Exposed and Replacement Cost (Gray Area)

Occupancy Type	Building Counts	Exposure (thousands)
Residential	7,864	1,518,243
Commercial	144	385,302
Industrial	13	50,309
Agriculture	0	1,868
Religious	4	15,049
Government	10	11,965
Education	10	69,448
Total	8,045	2,052,184

Essential Facilities Damage

Fortunately, in this scenario, there are no essential facilities that fall within any of the concentration areas (i.e., the red, orange, or yellow areas); all of the affected essential facilities fall within the confines of the confidence boundary. Within this area, there is one care facility, two emergency centers, six fire stations, three police stations, and fifteen schools. The affected facilities are identified in Table 7. Their geographic locations are depicted in Figures 5 (Care Facilities, Emergency Centers, and Police Stations), 6 (Fire Stations), and 7 (Schools).

Table 7: Essential Facilities within Plume Footprint

TYPE	NAME	ADDRESS	HAZUS_ID
Care Facilities	Provena St. Joseph Medical Center	333 N Madison St	IL000228
Emergency Centers	Elwood EOC	309 W Mississippi St	IL000156
Emergency Centers	Rockdale EOC	603 Otis Ave	IL000168
Fire Stations	East Joliet FPD #2	102 E Zarley Blvd	IL001033
Fire Stations	Elwood FPD	309 W Mississippi St	IL001057
Fire Stations	Joliet FD #6	2049 Oneida St	IL001060
Fire Stations	Joliet FD #7	125 S Houbolt Rd	IL001059
Fire Stations	Rockdale FPD	603 Otis Avenue	IL001012
Fire Stations	Troy FPD	107 W Jefferson St	IL001017
Police Stations	Elwood Police	201 E Mississippi Ave	IL000873
Police Stations	Joliet Junior College Police	1215 Houbolt Rd	IL000888
Police Stations	Rockdale Police	79 Moen Ave	IL000881
Schools	B Noonans Child Care (Joliet)	2504 Fairway Dr	IL005441
Schools	Dirksen Jr. High	203 S Midland Ave	IL005318
Schools	Elwood Elem.	409 N Chicago Ave	IL005393
Schools	Heritage Trail	3389 Longford Dr	IL005290
Schools	Laraway Elem.	275 W Laraway Rd	IL005298
Schools	Lynne Thigpen Elem.	207 S Midland	IL005315
Schools	Marycrest	303 Purdue Ct	IL005309
Schools	Oak Valley	1705 Richards St	IL005299
Schools	Rockdale Elem.	715 Meadow Ave	IL005300
Schools	Shorewood	210 School Rd	IL005291
Schools	SOWIC Ed. Center	1705 Richards St	IL005436
Schools	St. Jude (Joliet)	2204 McDonough	IL005467
Schools	St. Paul the Apostle	130 N Woodlawn Ave	IL005476
Schools	Thomas Jefferson	2651 W Glenwood Ave	IL005306
Schools	United Cerebral Palsy of Will County	311 S Reed St	IL005483

Figure 5: Essential Facilities within Plume Footprint (Care, Emergency, and Police)

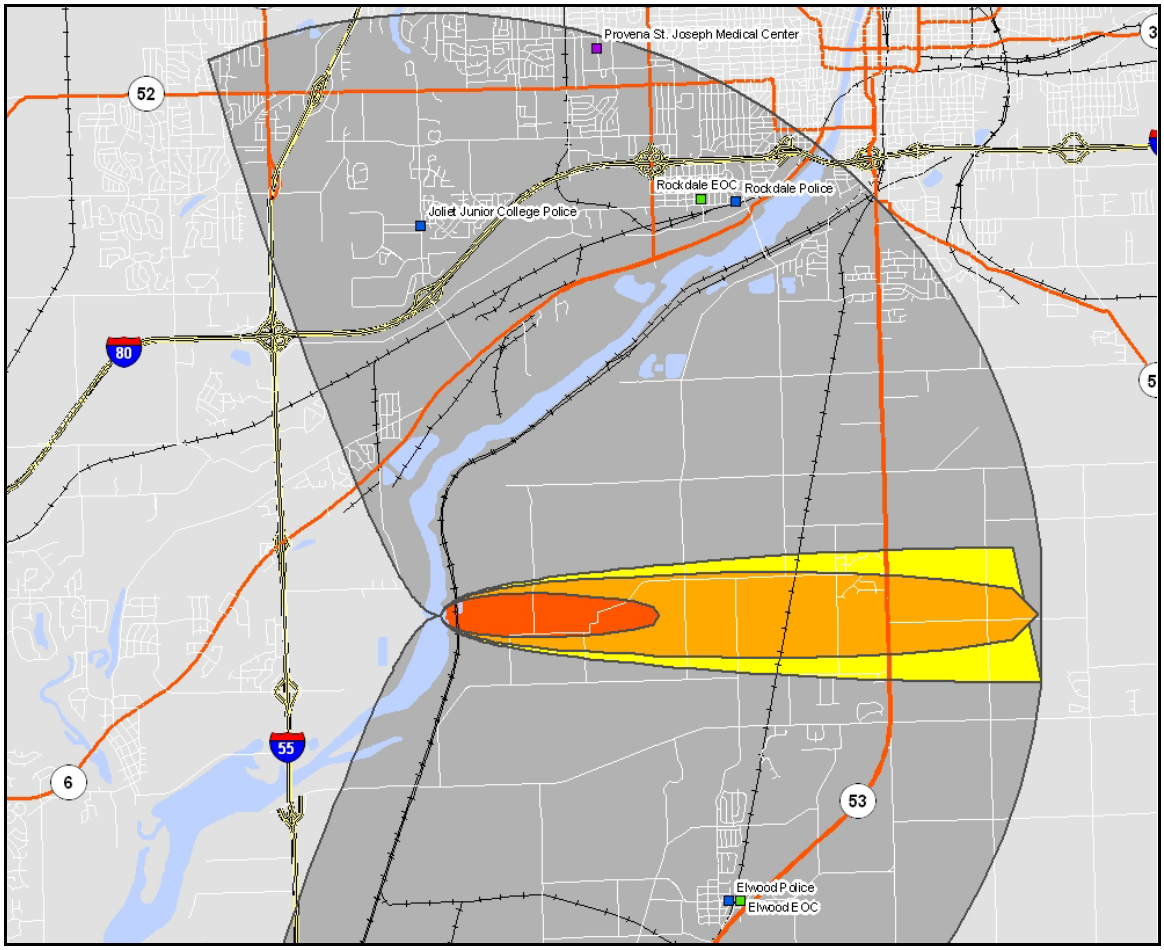


Figure 5: Essential Facilities within Plume Footprint (Fire)

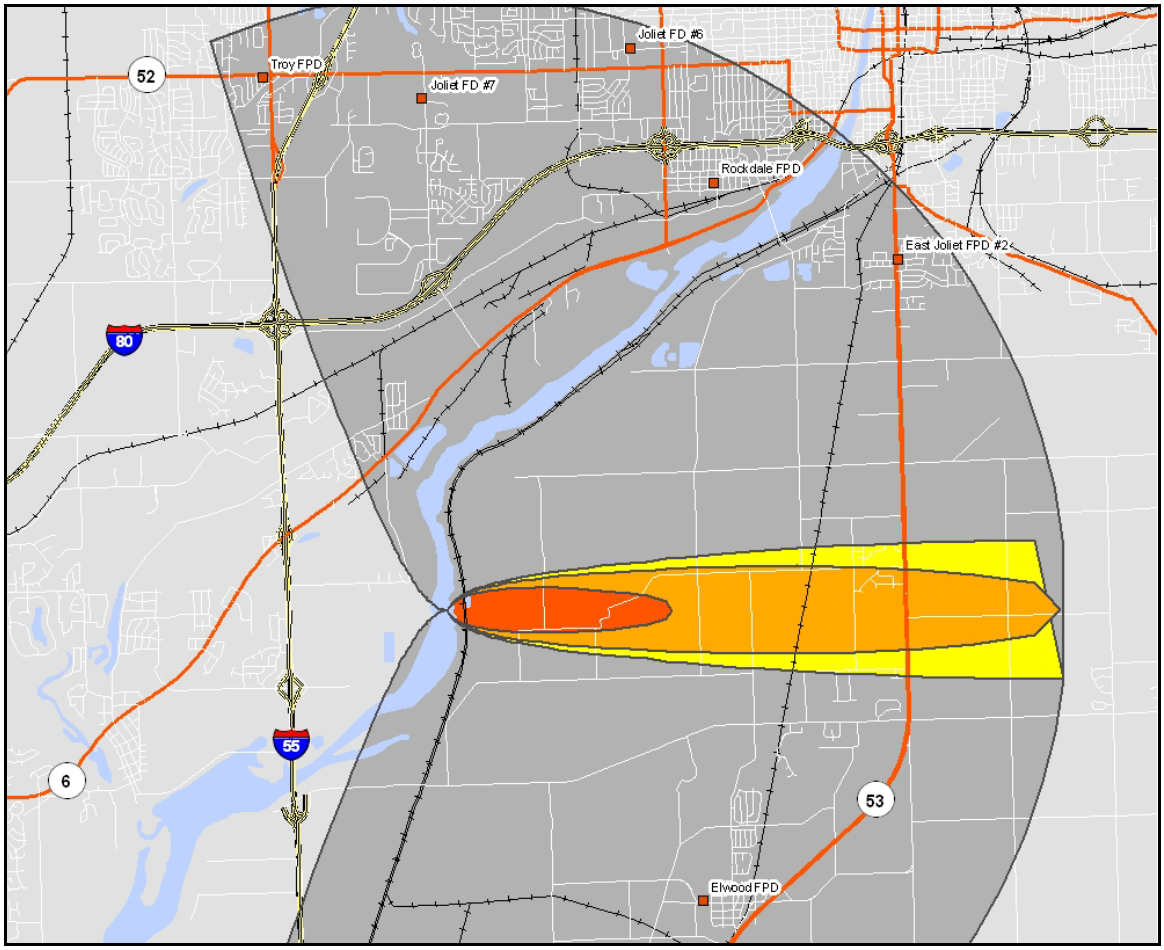
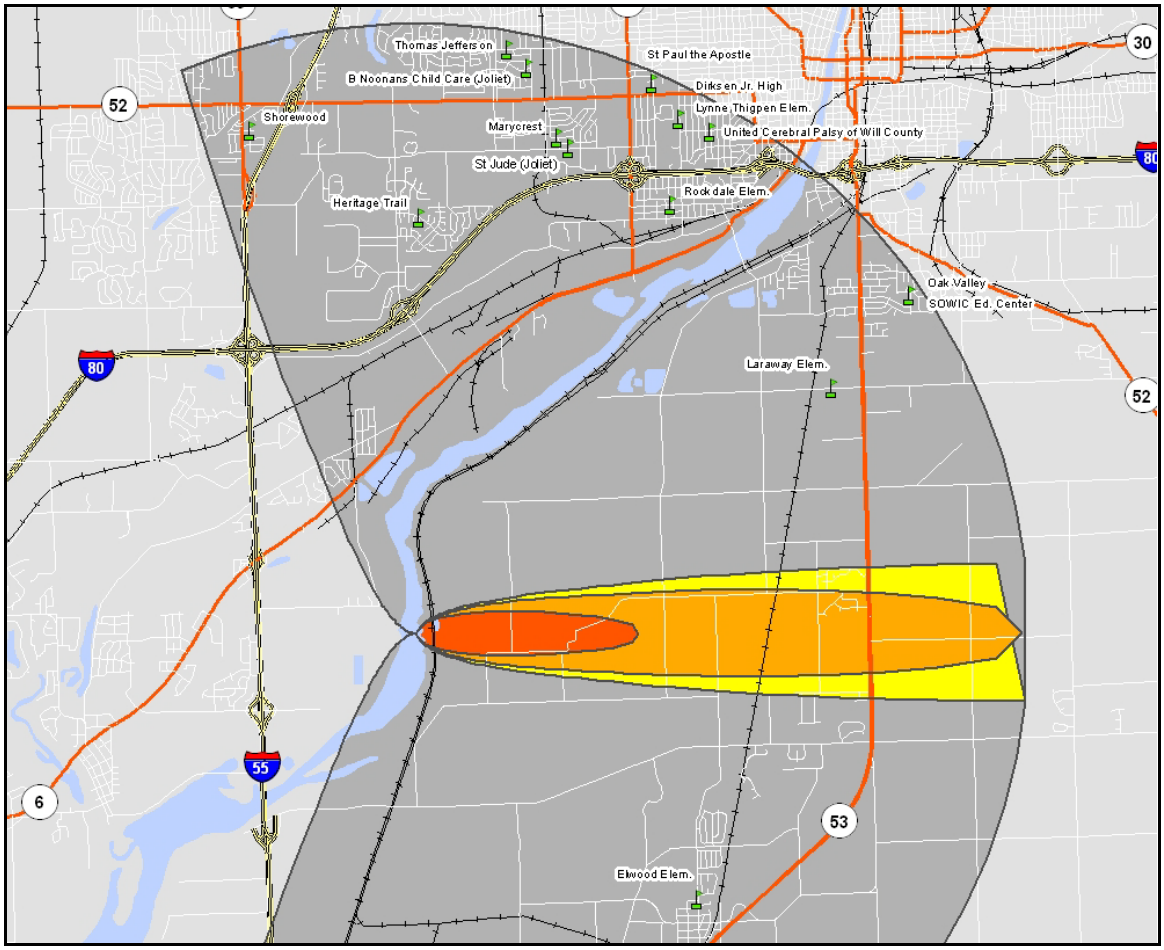


Figure 5: Essential Facilities within Plume Footprint (Schools)



Will County Hazard Risk Assessment
Munitions Results

Disclaimer:
The estimates of social and economic impacts contained in this report were produced using limited GIS and HAZUS loss estimation data. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific hazard. This analysis is intended to provide conceptual information that can be used to identify mitigation opportunities. These results can be improved by using enhanced inventory data and h

December 19, 2005

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The Polis Center
We bring things into perspective.

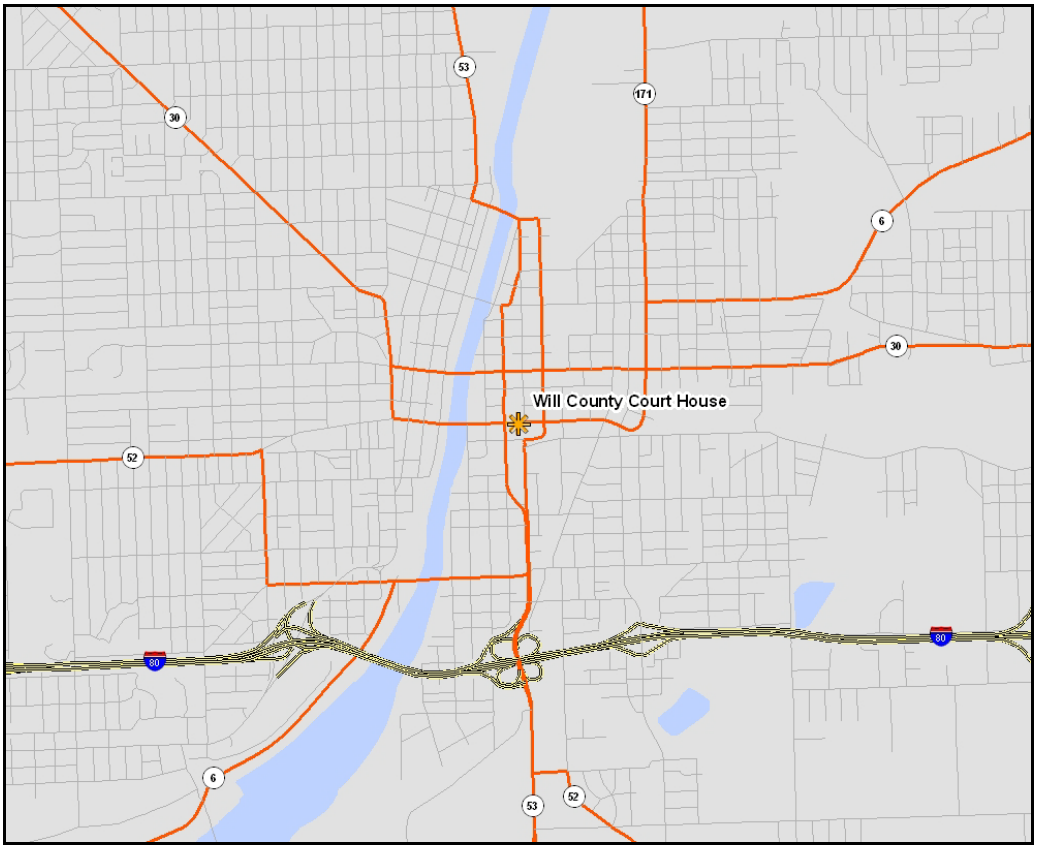
Munitions

GIS analysis was utilized to determine the impacts of a bombing near a critical piece of county government infrastructure, similar in magnitude to the April 19, 1995 Oklahoma City Bombing. In the Oklahoma City Bombing, a Ryder rental truck was loaded with approximately 5,000 pounds of ammonium nitrate fertilizer and detonated outside of the Murrah Federal Building. The explosion generated a pressure blast of 500,000 psi, destroyed one-third of the Murrah Federal Building, and created a crater thirty feet wide and eight feet deep. The target analyzed in this hazard modeling is the Will County Court House. This identified target is consistent with Will County's Infrastructure Security Buffer Zone Protection Plan, which utilizes the Carver Scoring system to identify high-profile targets.

Review Existing Information

The 2000 Census Block boundaries and population figures, as well as the values for building counts and building replacement cost were extracted from the HAZUS-MH provided inventory. The geographic area covered in this analysis is depicted in Figure 1.

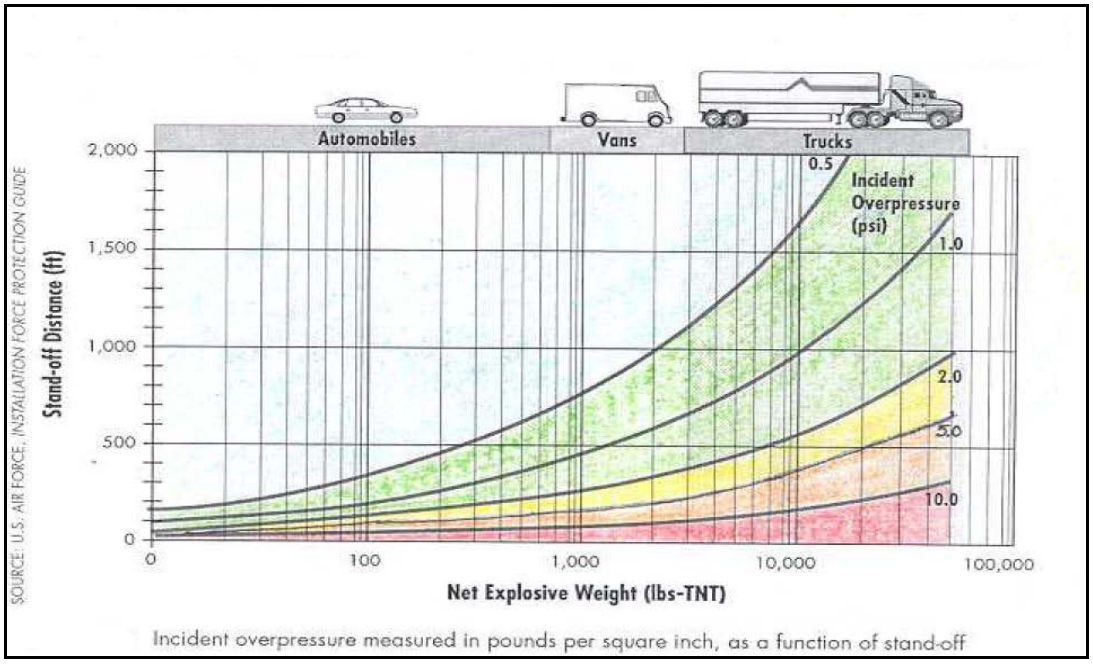
Figure 1: Location of the Will County Court House Building



Analysis

Buffers were created at 100 feet, 200 feet, 350 feet, 650 feet, and 1,150 feet, using the Will County Court House as the point-of-origin. These distances were selected based on the diagram in Figure 2. The distances listed above are where 5,000 pounds of explosives intersect the incident overpressure curves.

Figure 2: Damage Impact as a Function of Distance and Weight



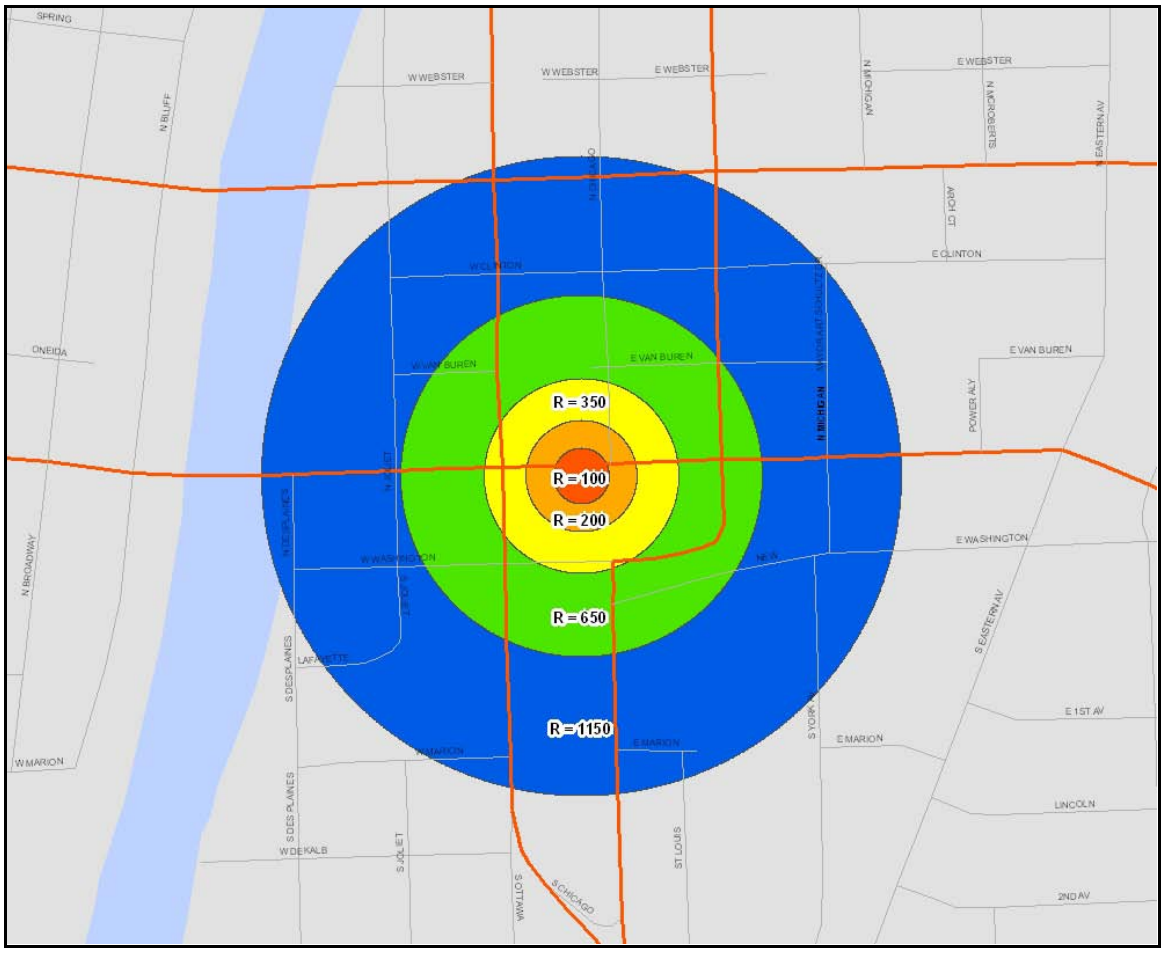
Each incident overpressure curve represents the amount of blast pressure emitted from an explosive device. The area between each curve represents the amount of damage that can be expected. As the incident overpressure increases (stated in pounds per square inch or PSI), so too does the amount of damage. For each level of potential damage, a percentage was applied when calculating the number of buildings damaged and replacement cost. Those percentages are depicted in Table 1.

Table 1: Percent Damage Factor per Amount of Damage

Damage Type	Percent Damaged	Description
Severe Damage	100%	Total destruction of most buildings
Heavy Damage	75%	Over 50% of major structural and secondary
Unrepairable Damage	50%	Sections of structure may collapse or lose structural capacity
Repairable Damage	25%	Minor to major structural and non-structural deformation
Minimal Damage	5%	No permanent deformation, minor damage

As stated above, buffers were created at 100 feet, 200 feet, 350 feet, 650 feet, and 1,150 feet, using the Will County Court House as the point-of-origin. The image in Figure 3 depicts the Will County Court House building and its surroundings, with the five buffer regions emanating outward.

Figure 3: Affected Area around the Will County Court House Building



The 2000 Census Block layer was added to ArcMap and overlaid with the five buffer areas. The 2000 Census Block layer was then clipped against each of the five buffer areas. Clipping could be defined as the process of extracting features from one layer, in this case the 2000 Census Block layer, based on the boundary of another layer, in this case one of the five buffer areas. Figures 4 and 5 depict the 2000 Census Block areas before and after the "clipping" process.

Figure 4: The 2000 Census Block Areas before the "Clipping" Process

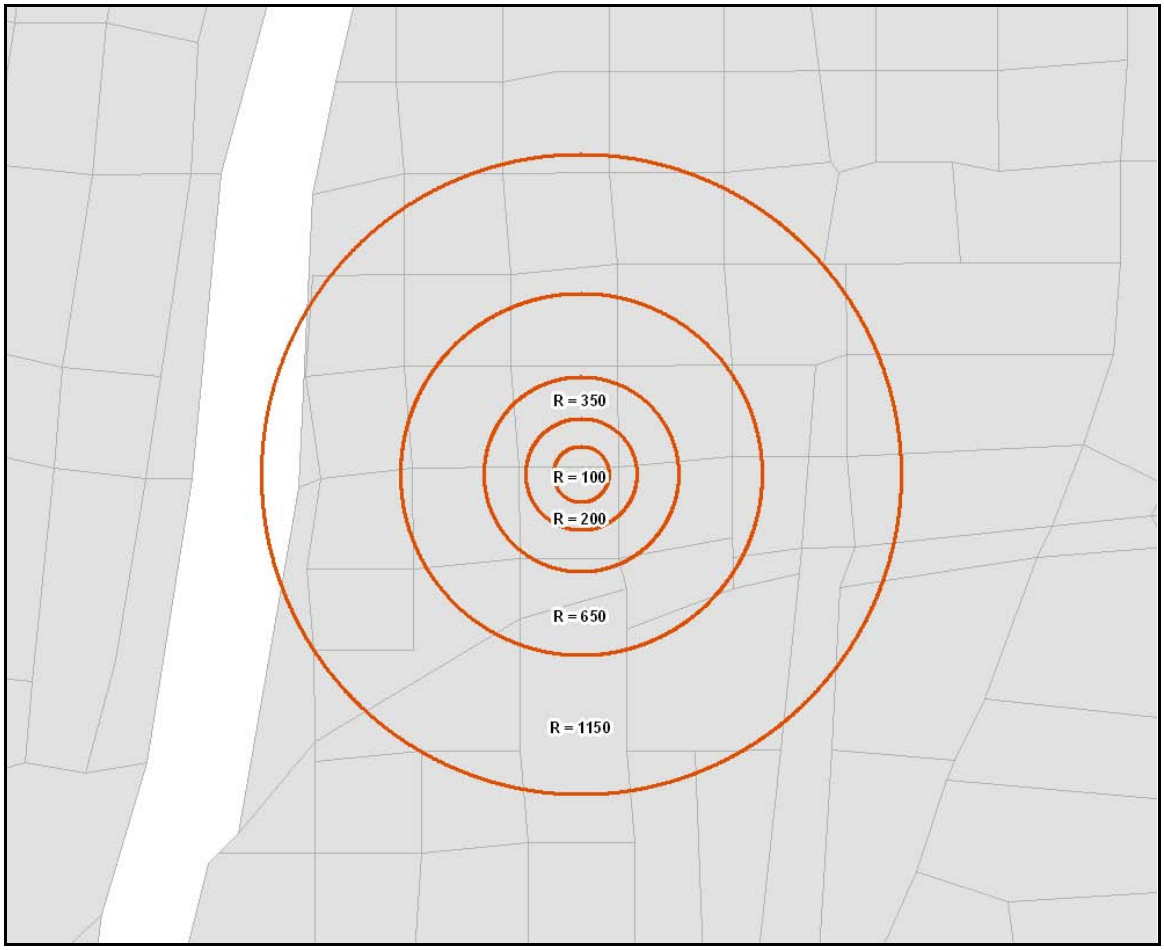
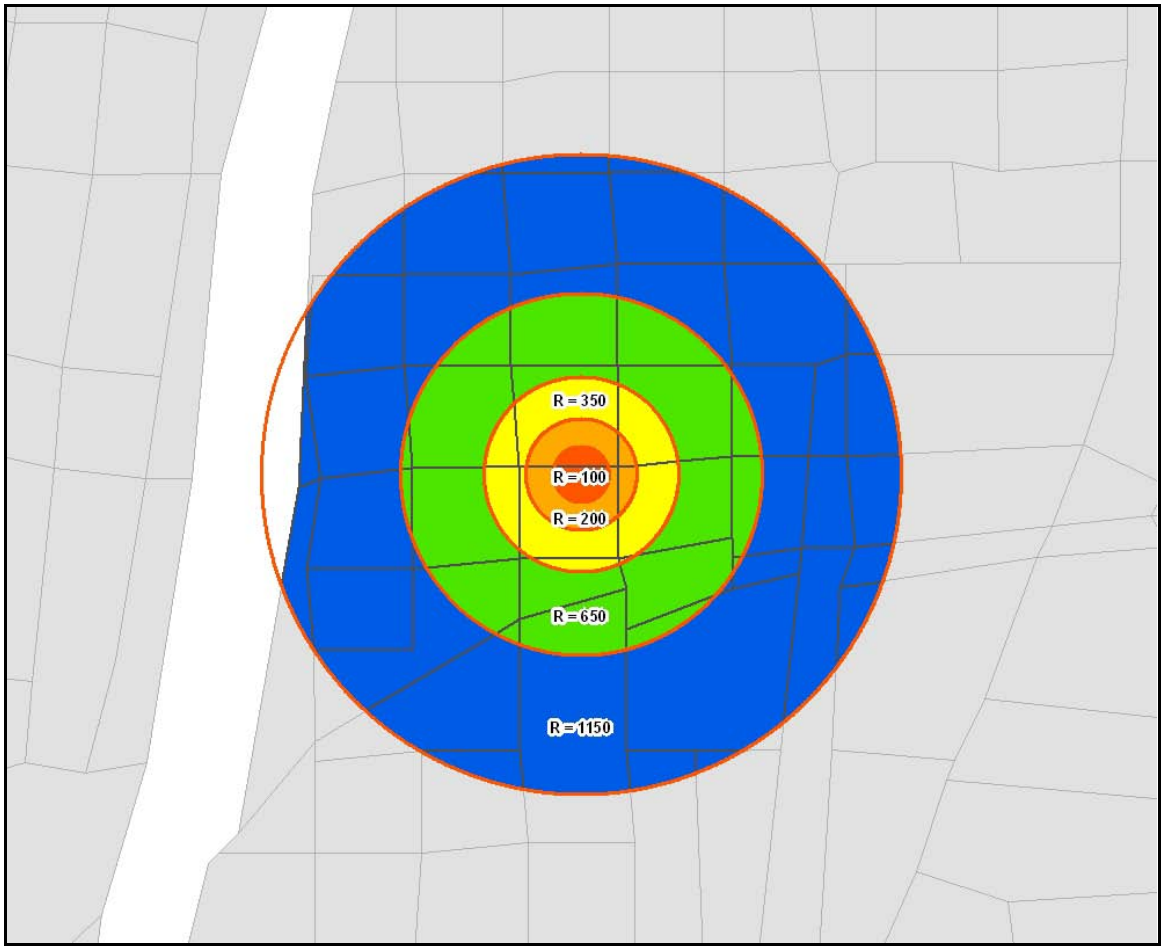


Figure 5: The 2000 Census Block Areas after the "Clipping" Process



A field was added to the table to denote the percentage of each Census Block that fell inside each of the five buffer areas. To populate this field, the area of each clipped Census Block was divided by the area of the original Census Block. The percentages were then multiplied by the building count and exposure values.

Assumptions:

- For this analysis it was assumed that all buildings and population were evenly distributed across each census block. Thus, if 50% of a census block fell within the buffer area, it was assumed that 50% of the structures and population also fell within that area.

Results

By summarizing the results of each of the five buffer areas, the GIS analysis estimates that as many as 19 buildings could be damaged at a replacement cost of $53,590,000. The inventory data upon which these estimates are based was obtained from the HAZUS-MH provided dataset. This dataset was compiled through a combination of 2000 Census data and information compiled by Dun and Brandstreet for the HAZUS-MH application. The building exposure is an estimate of building replacement costs.

As noted earlier, it is important to note that these estimates are based on an area weighted analysis. In this analysis it was assumed that all buildings were evenly distributed across each census block. Thus, if 50% of a census block fell within the buffer area, it was assumed that 50% of the structures and population also fell within that area. In reality, the actual number of buildings could be much higher or lower than estimated.

The results of the analysis are depicted in Tables 2 through 7. Table 2 summarizes the results of the five buffer areas. Tables 3 through 7 depict the results for each of the five buffer areas.

Table 2: Estimated Number of Buildings Damaged and Replacement Cost (Total)

	Building Counts	Exposure (thousands)
Residential	3	9,135
Commercial	13	33,634
Industrial	0	847
Agriculture	0	116
Religious	1	1,959
Government	2	4,615
Education	0	3,284
Total	19	53,590

Table 3: Estimated Number of Buildings Damaged and Replacement Cost (Within 100 ft)

	Building Counts	Exposure (thousands)
Residential	0	0
Commercial	1	1,586
Industrial	0	64
Agriculture	0	9
Religious	0	56
Government	0	125
Education	0	0
Total	1	1,840

Table 4: Estimated Number of Buildings Damaged and Replacement Cost (Within 200 ft)

	Building Counts	Exposure (thousands)
Residential	0	0
Commercial	2	5,540
Industrial	0	225
Agriculture	0	31
Religious	0	195
Government	0	436
Education	0	0
Total	2	6,427

Table 5: Estimated Number of Buildings Damaged and Replacement Cost (Within 350 ft)

	Building Counts	Exposure (thousands)
Residential	0	0
Commercial	4	9,804
Industrial	0	391
Agriculture	0	55
Religious	0	338
Government	0	756
Education	0	0
Total	4	11,344

Table 6: Estimated Number of Buildings Damaged and Replacement Cost (Within 650 ft)

	Building Counts	Exposure (thousands)
Residential	0	885
Commercial	2	4,805
Industrial	0	150
Agriculture	0	21
Religious	0	130
Government	0	771
Education	0	0
Total	2	6,762

Table 7: Estimated Number of Buildings Damaged and Replacement Cost (Within 1,150 ft)

	Building Counts	Exposure (thousands)
Residential	3	8,250
Commercial	4	11,899
Industrial	0	17
Agriculture	0	0
Religious	1	1,240
Government	2	2,527
Education	0	3,284
Total	10	27,217

Essential Facilities Damage

Within 100 feet of the blast point, there is one Police Station, the Will County's Sheriff's Office. Within the last buffer area, or from 651 feet out to 1,150 feet from the blast point, there are one emergency center and one police station, the Joliet EOC and the Joliet Police respectively. The affected facilities and their addresses are identified in Table 8. Their geographic locations are depicted in Figure 6.

Table 8: Essential Facilities within Defined Blast Radius

TYPE	NAME	ADDRESS	HAZUS_ID
Emergency Centers	Joliet EOC	150 W Jefferson St	IL000160
Police Stations	Joliet Police	150 W Washington St	IL000874
Police Stations	Will County Sheriff's Office	14 W Jefferson St	IL000891

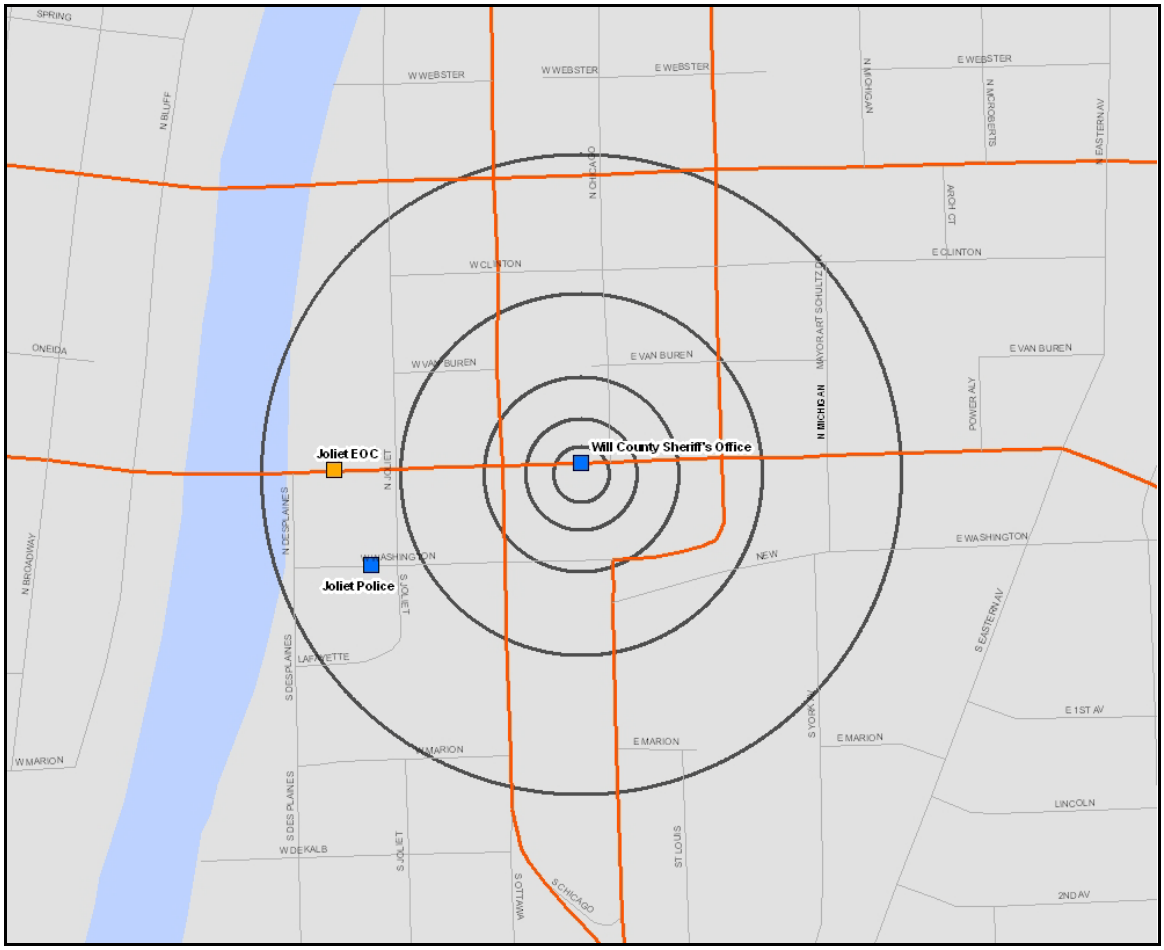



Figure 6: Essential Facilities within Defined Blast Radius