BOARD OF COMMISSIONERS **AGENDA** **JUNE 7, 2010**

CALL TO ORDER

PUBLIC HEARING REGARDING ZONING

No zoning cases for June

RESOLUTIONS

10-6-1: Resolution Adopting the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan

10-6-2: Resolution of the Montgomery County Board of Commissioners Approving Amendments to the 2009-10 School Budget

10-6-3: Resolution to Amend the Budgets of Various Funds for Fiscal Year 2010 in Certain Areas of Revenues and Expenditures

10-6-4: Resolution Authorizing Grant of TVA Transmission Line Easement

10-6-5: Resolution to Levy a Tax Rate in Excess of the Certified Tax Rate in Montgomery County, Tennessee, for the Fiscal Year Beginning July 1, 2010

10-6-6: Resolution Making Appropriations for the Various Funds, Departments, Institutions, Offices and Agencies of Montgomery County, Tennessee, for the Fiscal Year Beginning July 1, 2010 and Ending June 30, 2011 (FY11) and Approving the Funding of Non-Profit Charitable Organizations in Accordance with TCA §5-9-109

REPORTS

REPORTS FILED

CITIZENS TO ADDRESS THE COMMISSION

ANNOUNCEMENTS

ADJOURN

RESOLUTION ADOPTING THE MONTGOMERY COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS, the MONTGOMERY COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN (the 'Plan') was developed in accordance with and following the guidelines and requirements established, published and provided by FEMA and TEMA; and

WHEREAS, Montgomery County and its various departments, agencies, and operating units actively participated in and contributed to the preparation and development of the 'Plan'; and

WHEREAS, the 'Plan' has been developed to guide each participating jurisdiction in planning for and mitigating local hazards; and

WHEREAS, the completion and adoption of a hazard mitigation plan is a condition of qualification for potential future mitigation funding.

NOW, THEREFORE, BE IT RESOLVED by the Montgomery County Board of Commissioners assembled in regular session on this 14th day of June, 2010, that the Montgomery County Multi-jurisdictional Hazard Mitigation Plan is hereby adopted.

Duly passed and approved this 14th day of June, 2010.

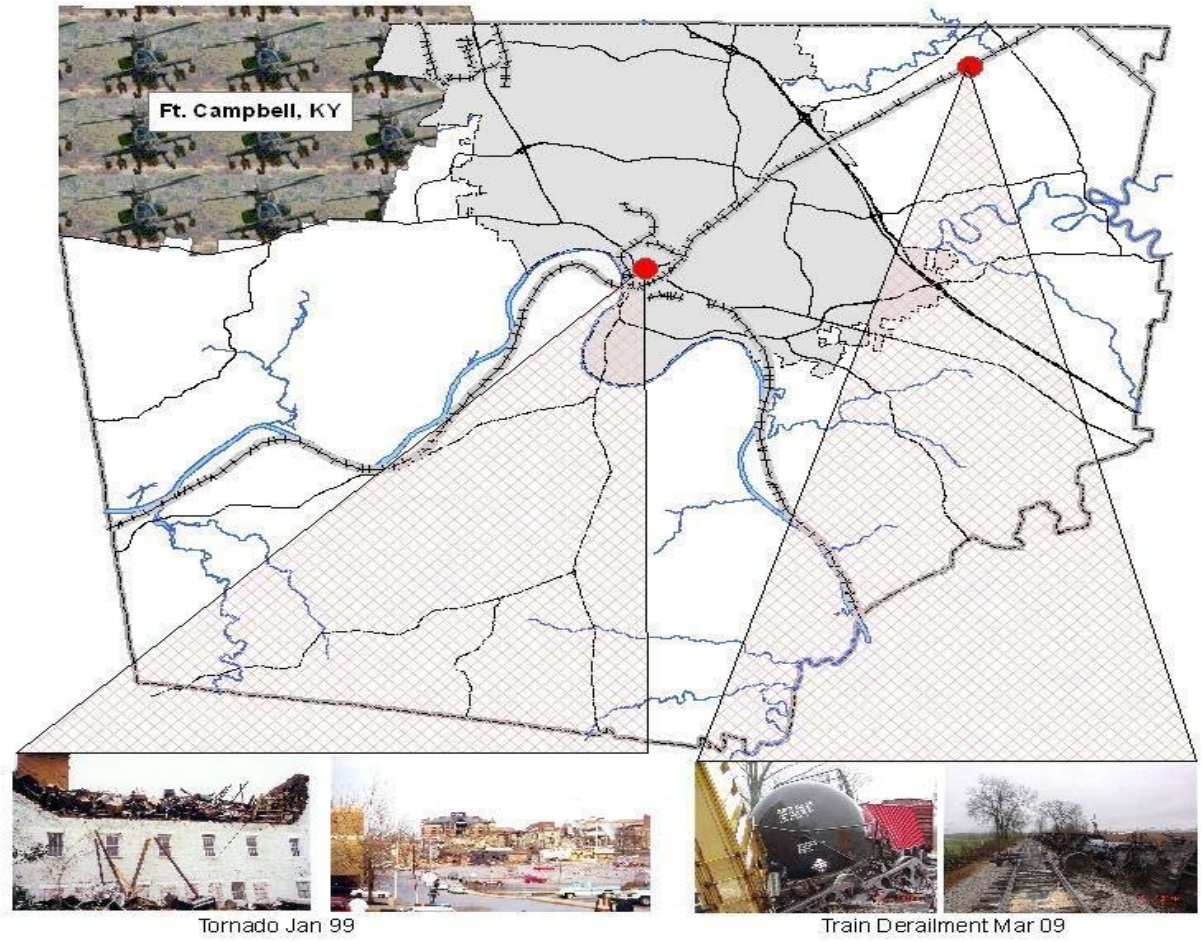
Sponsor _____

Commissioner _____

Approved _____
County Mayor

Attested _____
County Clerk

Montgomery County
(Including The City of Clarksville, and The Clarksville Montgomery County School System)
Multi-Jurisdictional Hazard Mitigation Plan



Tornado Jan 99

Train Derailment Mar 09

This plan update was completed with the assistance of multiple individuals and organizations. This Multi- Jurisdictional Hazard Mitigation Plan has been produced for Montgomery County, including The City of Clarksville governments, as well as, the Clarksville- Montgomery County School System in Tennessee and is submitted for review of all agencies.

This plan, its development, and the processes which were followed, adhere to the principles and stipulations outlined in 44CFR201.

A summary of changes from the plan update process is listed as appendix 8.

For additional information, contact

Steve Jones, Director,
Montgomery County EMA
130 S First Street
Clarksville, TN 37040

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I. INTRODUCTION

This plan was developed in accordance with the requirements of the Federal Emergency Management Agency (FEMA) to assist in the elimination of losses of life and property in the Montgomery County, the City of Clarksville, and The Clarksville-Montgomery County School System in Tennessee as a result of natural and manmade hazards. Fort Campbell Military Reservation, while located partially within the borders of Montgomery County is not included in this Plan as it is a Federal installation.

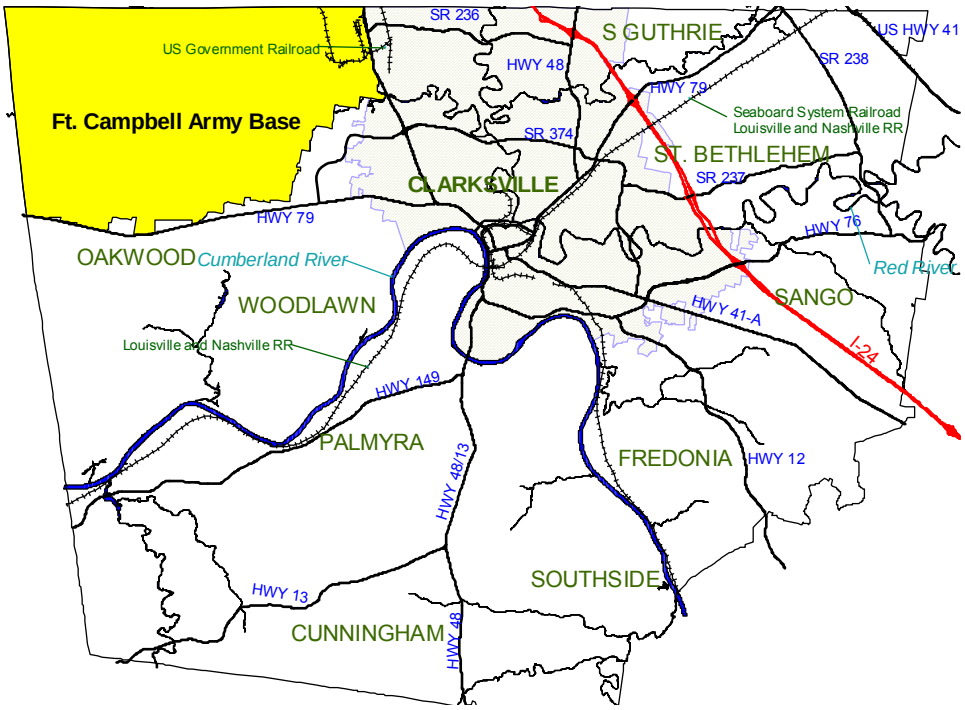
Montgomery County has one incorporated entity, The City of Clarksville, and one school system, The Clarksville-Montgomery County School System. Prior to March 2009, both the city and the county had developed and received approval for independent, stand-alone plans. In March 2009 both plans were consolidated into a single, composite plan. During the planning process to include the City of Clarksville in the Montgomery County plan, the Clarksville-Montgomery County School System was notified of their status as a local government as defined by 44CFR Part 201. 2. The Clarksville-Montgomery County School System requested to be included in the planning process for the five year plan update that was to start later in 2009, so that the school system could be included as a local government in the multi-jurisdictional plan. The plan is now referred to as the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan. The Montgomery County Multi-Jurisdictional Hazard Mitigation Plan will be reviewed and incorporated into the risk assessment of all planning processes used within the county, the city, and the school system to the extent that it is appropriate.

The Community

Montgomery County is located in northern middle Tennessee, on the Tennessee – Kentucky border. The area is in the center of one of the Southeast's largest and most rapidly growing industrial complexes and also serves as one of its premier development locations. Montgomery County is surrounded by five Tennessee counties and two Kentucky counties.

Montgomery County has a total of 539 square miles within its borders and is comprised of multiple unincorporated communities (Palmyra, Woodlawn, etc.) and one incorporated entity, the City of Clarksville (98 square miles). Fort Campbell Military Reservation, home of the 101st Air Assault Division, encompasses an area of 62 square miles within the county.

The Clarksville-Montgomery County School System serves 29,000 students and employs approximately 3,900 teachers, administrators, and support staff. There are 37 school sites in the system and they are spread across the entire county land area: one K-5 Magnet School, 21 elementary schools, 7 middle schools, and 7 high schools. The Clarksville-Montgomery School System is one of a distinguished group of schools that has earned accreditation system wide, and is one of a few in the nation that is ISO 9001 certified.



According to 2008 Census Bureau population estimates Montgomery County has 154,756 residents.

Data provided by the Montgomery County Computer Aided Assessment System shows that there were 56,372 residential building units in Montgomery County as of September 10, 2009, and the Clarksville-Montgomery County Economic Development Council listed 4,658 businesses.

Although there has been a steady stream of businesses and industries building in Montgomery County, recent development trends have leaned toward large residential subdivisions as more and more people relocate here. The placement of Fort Campbell Military Reservation here brings in a large number of both active duty and retired military, fueling our need for more homes and the supporting infrastructure.

The construction of businesses and industries has been steady in recent years and is expected to remain so. Businesses and industries locate here due to our strong transportation system, highly trained work force, and low cost of living. To illustrate, in 2009, Hemlock Semiconductor announced plans to construct a new $1.2 billion plant in the Industrial Park. Several support businesses are expected due to the Hemlock Semiconductor construction.

Development, whether residential, commercial, or industrial, is controlled through zoning regulations adopted by both the city and the county. These regulations contain specific requirements for development such as lot size, distance from neighbors and property lines, and zoning classifications.

Local Government

Montgomery County is governed by an elected County Mayor and Board of Commissioners while the City of Clarksville is governed by an elected Mayor and City Council.

The Clarksville-Montgomery County School System is governed by an elected school board who sets the policies that govern the system.

Infrastructure

Montgomery County is crossed by eight Federal and State highways (including Interstate 24), two rail lines, one petro-chemical (Xylene) pipeline, one crude oil pipeline, numerous natural gas pipelines from three separate carriers, the Cumberland and Red Rivers, and a regional airport.

There are 1,786 miles of roadway and 167 bridges inside Montgomery County, including two railroad bridges, one railroad tunnel, and 71 miles of railroad.

Natural gas service does not extend to all parts of the county, with the predominant service area being the City of Clarksville, adjacent residential developments, and the industrial park. The local natural gas distribution system consists of 572 miles of pipeline of various sizes.

The City of Clarksville's wastewater collection system (670 miles of lines) is a complex network which includes 218 lift stations, 14 large collection lift stations, and overflow facilities. While some sewer service is provided for county residents by the City of Clarksville, most of the county is not serviced by sewer and relies on septic tanks for wastewater collection.

Montgomery County is serviced by four water utilities serving nearly 10,000 homes and businesses. Some areas of the county are served by the City of Clarksville's water utility, which serves nearly 135,000 residents. Some rural homes still depend upon wells for potable water.

All water systems have a redundant, looped design and water can flow in either direction in a main, depending on where the greater pressure exists. Thus it is possible that a single break in a main could be isolated by shut-off valves, and water service could continue for most customers with little or no interruption.

Agriculture

Montgomery County (excluding Ft. Campbell) contains 305,280 acres of which 151,461 were in agricultural use as of 2007 per the USDA 2007 Census of Agriculture County Profile. This was comprised of 862 farms growing/raising a wide range of products (soybeans, corn, cattle, tobacco, etc.) accounting for $27,823,000 in agri-business in 2007.

Climate

Winters (December – February) are cold and wet with an average low of 27.5 degrees and average annual snowfall of 10.6 inches. Occasional winter storms can be brutal with frigid temperatures and accompanying ice and snow.

Summers (June – August) are hot and humid, with an average high of 88.6 degrees with a period of low rainfall amounts during the summer, particularly July and August.

The area's prevailing winds are Southerly at an average of 6 mph. The area has an average relative humidity of 85% at its peak (6 AM) and 59% at its low (noon).

Hazards

Historically, a variety of natural hazards have impacted Montgomery County, including floods, earthquakes, wind storms, tornadoes, ice and snow storms, drought, land subsidence (sinkholes), and lightning. Lightning and droughts are referenced in the hazards section in this plan only. They do not have the historical significance based on data from the National Climatic Data Center (NCDC) as the other weather related events dating back to 1950. The NCDC data from 1950 reveals a six month period of drought in 2007, and only two lightning events during the same time period. Obviously, each time a thunder storm rolls across the county, there is lightning associated with it. However, based on the data from the NCDC, and the minimal extent of significant lightning impact reported, the Hazard Mitigation Team determined that further inclusion as part of the risk assessment was not necessary. Typically, the natural hazards including land subsidence (sinkholes), that impact the county generally would include the City of Clarksville, and the Clarksville-Montgomery County School System also, since they lie within the county boundaries. With the exception of service disruptions to utilities such as natural gas and wastewater treatment, which are predominately only available within the city limits, the extent from a disaster including land subsidence (sinkholes), would not be different because of jurisdictional boundary lines. Man-made hazards also occur, to date primarily as hazardous material incidents.

Across-the-street proximity to Ft. Campbell and a large active military population also creates a possibility for terrorist incidents. An earlier threat assessment for Montgomery County brought this fact to light and plans were made for response and prevention. Due to the sensitive nature of this subject it was decided to not include a section on terrorism within this plan

Partnerships

The Hazard Mitigation Team consisted of representatives from Montgomery County, The City of Clarksville, and The Clarksville-Montgomery County School System and the planning reflects the same types of partnerships that exist in many of the on-going jurisdiction activities. Various county and city departments and agencies, utilities, commercial establishments, the public, and advisory groups were involved in the compilation of this plan. (See planning team on page 12)

Resources

A majority of the statistics used to develop this plan were derived from governmental, technical, and historical resources including, but not limited to the following: the United States Geological Survey, the Tennessee Emergency Management Agency, NOAA Archives and Reports Section, local print media, U.S. Census Bureau, and the GIS Center at Austin Peay State University.

Software used in the compilation of data included, Arc Map, HAZUS-MH, and Microsoft Office.

Additional resources used in the formulation of the plan include City Ordinances, County Resolutions, school system policies, the Hazard Mitigation Team, and various subject-matter experts.

Challenges/Obstacles/Limitations

Challenges included finding data, organization of the Hazard Mitigation Team, and calculating estimates and projections for items for which current data could not be found.

Obstacles included the fact that there is no current data available for some items and scheduling Hazard Mitigation Team meetings at times when all members could be present. This item was soon found to be nearly impossible considering the various work schedules, etc.

We overcame this problem through rapid dissemination of minutes from the meetings to members who were unable to attend. Those members would then respond with their own comments, suggestions, etc. for inclusion.

Limitations included both financial and technological subjects. An increased budget would have given us the opportunity to attend more planning related training, purchase other helpful software applications, and purchase other equipment related to planning.

The shortcomings of HAZUS-MH were realized early on as disaster scenarios were run and results analyzed. Models provided through HAZUS-MH analysis were not consistent with accepted damage estimates for our area developed by the Central United States Earthquake Consortium (CUSEC) and the United States Geological Survey (USGS) for a major earthquake in the New Madrid Seismic Zone. Therefore, CUSEC and USGS data were included with this Plan. The absence of recent local earthquake events is both a blessing and a hindrance. Earthquake events are rarely considered by many in this area and both repeat modeling and public awareness programming are indicated.

New Benefits and Capabilities

New benefits resulting from this project include a more team-based approach to pre-disaster planning. As a result of the format required by FEMA a broad base of persons with different experiences and knowledge to bring to the table were involved in the process. Each person/agency left the process with a sense of ownership of the plan and an awareness of the problems faced by the different people/agencies. Some agencies discovered that they share some of the same problems and/or had a solution to another agency/person's problems.
The process provided an avenue to share information about the different problem areas and items that they experience. Increasing the stakeholder base in pre-disaster mitigation (PDM) planning has generated a stronger base of pre-disaster advocacy. To what extent that new knowledge base creates demand beyond traditional advocates is yet to be measured and evaluated.

An added benefit for the community is that three jurisdictions are dedicated to providing hazard mitigation planning together rather than as separate entities. As part of the planning process each jurisdiction is represented on the hazard mitigation team and has reviewed each section of the original combined plan for the county and city that was approved in early 2009. Each jurisdiction has provided updated data relevant to their respective jurisdictions to incorporate into the multi-jurisdictional plan. Each mitigation action was reviewed by the team members and any changes to the mitigation actions were agreed upon by each jurisdiction affected by the mitigation action.

New mitigation actions were developed by the Clarksville-Montgomery County School System as part of the planning process, as well as the school system's inclusion into other mitigation actions that were pertinent to it.

January 1999 Tornado Damage

II. LOCAL HAZARD MITIGATION PLANNING PROCESS AND TEAM

This plan, its development, and the processes which were followed, adhere to the principles and stipulations outlined in 44CFR201. The three Jurisdictions involved in the planning process are Montgomery County, The City of Clarksville, and the Clarksville-Montgomery County School System.

A summary of changes from the plan update process is listed as appendix 8

Hazard Mitigation Team

The Montgomery County Multi-Jurisdictional Hazard Mitigation Team is composed of 15 agencies within the county, city, and the school system with at least one representative from each. The latest meeting of the Hazard Mitigation Team was held on September 11, 2009 at the Montgomery County Emergency Operations Center to discuss the plan update process, the addition of the Clarksville-Montgomery County School System as a government entity that will be part of the planning process, and the opportunity to address any maintenance issues with the current plan as part of the update. Minutes and attendance sheets are kept on record at the Montgomery County Emergency Management Agency and copies are located in Appendix of this Plan.

Composition of the Hazard Mitigation Team is as follows:

Montgomery County Emergency Management Agency (project lead)
Montgomery County Building and Codes
Montgomery County Highway Department
Clarksville Building and Codes
Clarksville Street Department
Clarksville Gas & Water
Clarksville Department of Electricity
Clarksville Finance Department (Grants Division)
Cumberland Electric Membership Corporation
Austin Peay State University Geographic Information System Center
Clarksville- Montgomery County School System
Clarksville- Montgomery County Regional Planning Commission
Clarksville-Montgomery County Industrial Development Board
Clarksville-Fire/Rescue

Planning Team Method of Approach

The latest meeting of the Hazard Mitigation Team was held on September 19, 2009 and consisted of a power point presentation over the plan update process, an explanation of how the school system is designated as a local government by 44 CFR Part 201.2. The information also discussed how the school system will be part of the planning process, and become a new jurisdiction covered by the plan. As part of the planning process each jurisdiction is represented on the hazard mitigation team and has reviewed each section of the original combined plan approved in early 2009. Each jurisdiction through team member participation has provided updated data relevant to their respective jurisdictions to incorporate into the multi-jurisdictional plan.

Each mitigation action was reviewed by the team members and any changes to the mitigation actions were agreed upon by each jurisdiction affected by the mitigation action.
New mitigation actions were developed by the Clarksville-Montgomery County School System as part of the planning process, as well as the school system's inclusion into other mitigation actions that were pertinent to it.

Processes used to review and analyze each section of the plan during the update including the planning process, risk assessment, mitigation strategies, and plan maintenance.

Each hazard mitigation team member followed the programmatic format in the update process to include review, analysis, and update of the current plan. Each section of this plan was revised during the update process. Most of the revisions were due to updated data, some were changes in terminology, and certain areas within the plan were rewritten to clarify the subject material.

Initiation of the plan update process began with the EMA Planner revisiting data sources utilized in developing the risk assessment for each hazard included within the plan, and where new data existed, the information resources were updated. This information was used to modify the sections of the plan pertaining to risk assessment, which were then presented to the team.

The amended risk information, particularly event frequency and probability, were presented to team members, where each team member reviewed the existing exposure and impact analysis based upon the exposure information for each hazard. In turn, they presented recommendations for amendment or modification, if the revised risk analysis data appeared to have any change implications on subsequent elements of the plan update process.

Each team member then reviewed the consequences of the hazard and potential event to assess if the current status in the plan was appropriate. From that determination, the loss estimation was modified, but only in those situations where loss estimates were deemed out of line with the amended risk analysis.

Finally, each team member re-examined the existing mitigation strategies in the plan to determine if the needs of their jurisdiction were adequately being addressed should natural hazard events occur and objectives were amended, added, or deleted by team participants.

Because of this organizational structure to the review process, each team member was apprised of the total picture and the elements involved in the risk analysis procedure. Team members reviewed the risk analysis based on several elements including:
▪If the risk assessment is still valid and in line with current conditions?
▪Have the nature, magnitude, and/or types of risks changed since the plan was approved?
▪Are the current resources still appropriate as when the plan was approved?
Any changes or modifications were submitted to the EMA planner who was tasked with administering the plan review and modification process for incorporation into the plan update document. The draft update with the changes and modifications was submitted to the hazard mitigation team members for another review for concurrence that the updated plan does meet the new hazard mitigation guidance as well as the needs of the jurisdictions represented in the plan.

A summary of the section by section review process including changes is provided as an appendix 8 in this plan.

Evaluation of this plan update began with plan development following the protocol established by FEMA. As components of the plan update unfolded and were developed, each jurisdiction reviewed critical dimensions of the plan to ensure that they met all federal, state, and local guidelines. As a consequence of the evaluation process (see page 95) by the team members, the final plan was assessed as being comprehensive, fair, and effective for each of the partners.

The opportunity for any plan maintenance issues with the original plan to be addressed as part of the update was also discussed. Team members were asked to review and analyze each section of the existing plan, recognize and identify hazards which affect our community, identify new hazard mitigation opportunities, and develop objectives and strategies to maximize those opportunities. The members were asked to make all recommendations and changes for each section of the plan through email as an electronic document rather than hard copies that would require retyping. The plan leader will condense and redistribute any changes to all of the members for review prior to incorporation into the update.

A Public Briefing announcing the draft plan update was available for review and comment by the general public, business, and academia was posted on the News and Information section of the Montgomery County Web Site and, printed in the Community Calendar section of The Leaf-Chronicle (local daily newspaper). A copy of the Public Briefing Announcement is located in the appendix 3 of this plan on pages 105-107.

In addition, existing local government ordinances (both City and County), school system policies, land-use plans, industrial development strategies, and other pertinent updated data were discussed individually with affected team members, reviewed, and included in the assessment. Multiple meetings of this type were held outside of the formal team meetings.

The final draft of the plan was then assembled and reviewed by the Hazard Mitigation Team. A Public Briefing announcing the final draft was posted on the News and Information section of the Montgomery County Web Site and, printed in the Community Calendar section of The Leaf-Chronicle (local daily newspaper). A copy of the Public Briefing Announcement is located in the appendix 3 of this plan on pages 108-110.

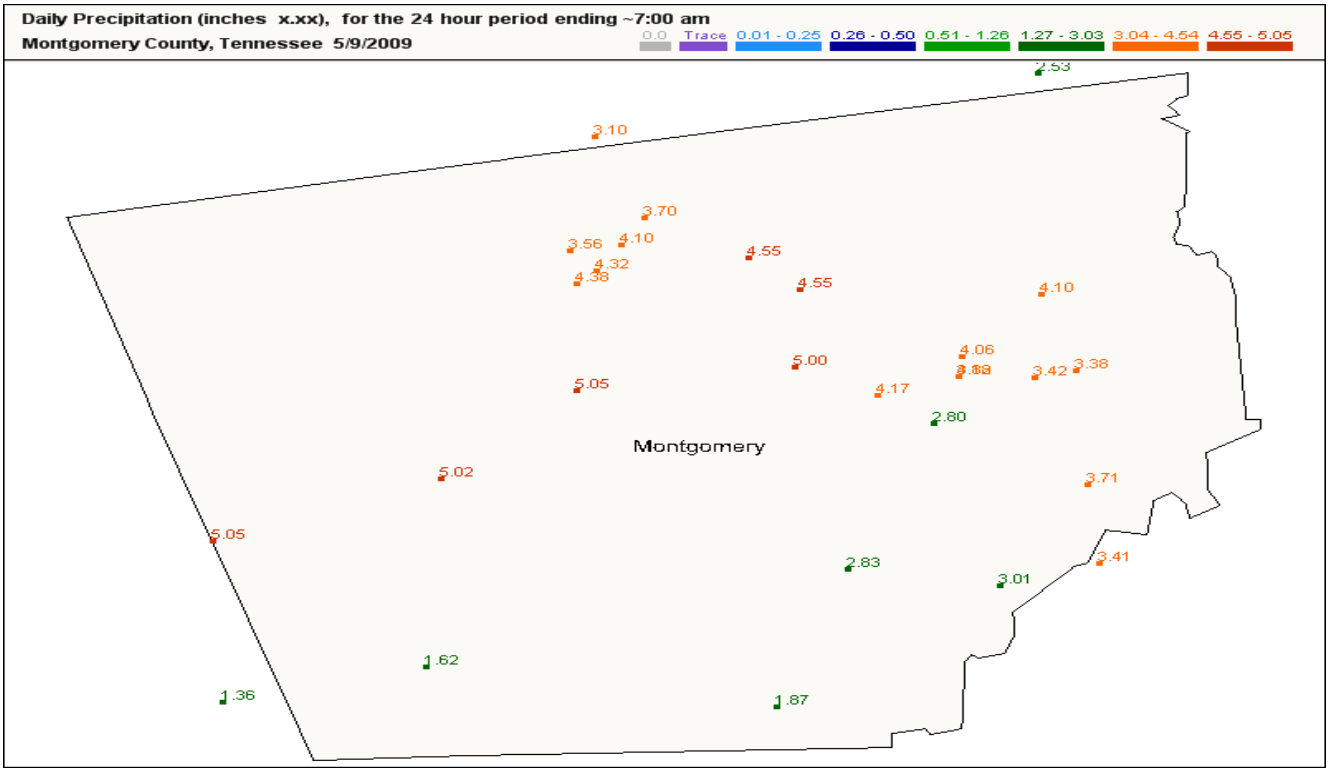
A summary of the section by section review process including changes is provided as an appendix 8 in this plan.

III. RISK ASSESSMENT

FLOOD HAZARDS FROM RUNOFF

The Cumberland River (with a watershed of 17,914 square miles), the Red River (with a watershed of 1,482 square miles), and multiple small tributaries flow through Montgomery County. Over the years the Army Corps of Engineers and the Tennessee Valley Authority have constructed a series of upstream locks, dams, and flood control reservoirs that collectively reduce the probability of major floods on the Cumberland in our area. Before the Corps' efforts, major flood events on the section of the Cumberland occurred in 1882, 1927, and 1937. The last major flood event on this section of the Cumberland was in March, 1975.

The other streams within the county have no flood control structures and are of a smaller scale than the Cumberland and the Red but are still significant flood areas. Due to the topography of Montgomery County with its rolling hills and deep valleys flood events are prone to occur on these streams. Flooding does not occur only in land areas adjacent to flowing streams. Many subdivisions and industries within Montgomery County and the City of Clarksville utilize sinkholes as drainage structures and as injection wells. As a natural drainage structure these sinkholes allow water to pool and then infiltrate through a natural, vertical drain channel to the groundwater system. Injection wells are simply sinkholes which have been improved to facilitate and improve the drainage properties of the sinkhole. These sinkholes, injection wells, and the drainage ways leading to them may become clogged, resulting in localized flooding. Localized heavy rains with rapid runoff characteristics, as well as flash flooding along the drainage routes, can also lead to local area flooding. Other hazards related to sinkholes will be discussed further in another section of this plan.



NOAA, NWS CoCoRaHS Daily Precipitation Map for Montgomery County, May 9, 2009

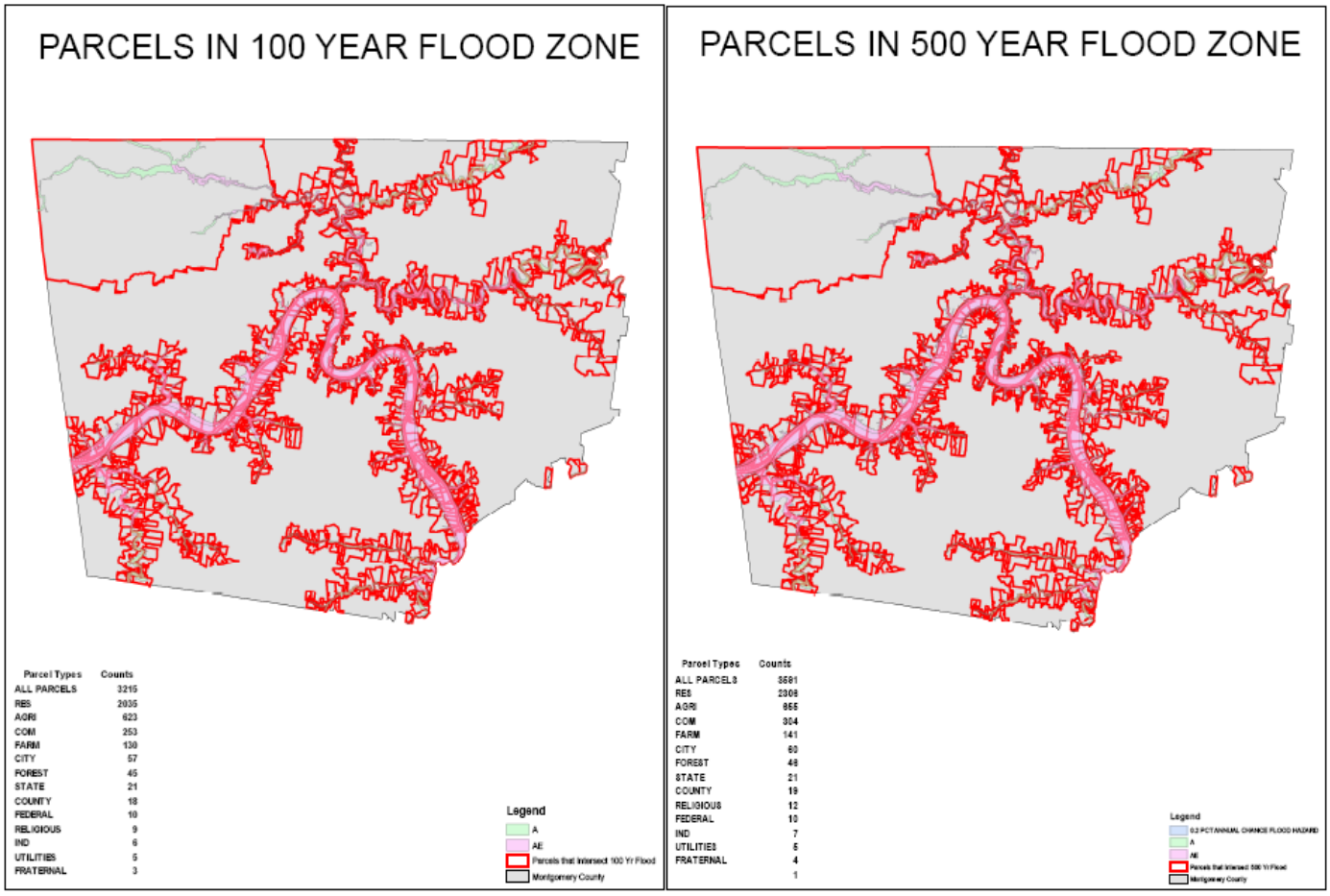
Probability and Frequency

In the 14.5 year period from January 1, 1994 to May 29, 2009, the city/county experienced 36 reported flood and flash flood events causing approximately $1,497,000 in property damage. Various degrees of flooding occurred with each of these events ranging from short-term flooding of lands in the primary flood plain to damage to homes and other property. One such event occurred on May 29, 2009 and caused over $300,000 in damage.

Event narrative from the NOAA Flood Events Record: *Twenty five homes received water damage. One family was trapped in their home, but was eventually rescued. Most homes had water damage in basements and crawl areas, with three to four homes receiving major water damage of which details of damage unknown. Emergency management officials reported an event total of 5.05 inches of rainfall. Newspaper reported that several roads were impassible due to the water depth on them. (May 29, 2009 event)*

The Clarksville Wastewater Treatment Plant is the official weather reporting agency submitting climactic data to the National Weather Service.
Although the area receives an average of about 50 inches of precipitation annually, few of those events involve heavy rain over an extended period of time.
For example, from May 2008 to May 2009, the county experienced 15 events where 24 hour rainfall accumulations exceeded 1.0 inch. Seven of those events resulted in observed rainfall totals in the 2-5 inch range, and each of them resulted in one or more sections of the county and city experiencing localized flooding or flash flooding conditions.

It is reasonable to expect that based on yearly average data, the county can expect an average of three flood/flash flood events annually.



Exposure and Impact

Exposure to runoff flooding and flash flooding events occurs most frequently in five (5) types of topography across the county: (1) flood plain areas adjacent to smaller streams and river tributaries which have no flood control structures, (2) flatland areas regardless of the elevation, (3) over roadways that traverse drainage flowage paths, (4) land in primary flood plains, and (5) in most areas where excessive rainfall is impounded.

There is always the potential for pollution and noxious conditions that accompany standing, slowly draining water accumulations after heavy rains.

The extent of damage based on a scale of low, medium, and high where “low” equals minor curb-deep street flooding and “high” equals major flooding from the rivers above flood stage. “High” would be the worst case scenario for all three jurisdictions.

Damage in paths of drainage typically is caused by either an abnormally large volume of runoff that exceeds the capacity of the drainage system, or trash and debris accumulation during runoff which blocks drainage outlets. In these situations, the runoff water may seek other routes resulting in damage to areas normally unaffected.

Because such runoff often lasts for a relatively brief time, the damage may be limited to short term isolation, minor flooding of outbuildings, and for drivers not alert to conditions, vehicle drown-out or loss of control. If residential structures are affected the damage is normally minor although an inconvenience due to the brief inundation.

Many pumping stations related to water and sewer service are located within floodplains. Heavy rains causes these stations to be flooded which disables them and has caused problems related to wastewater backing up into the floodwaters or in some cases entering the drinking water lines causing a serious public health problem

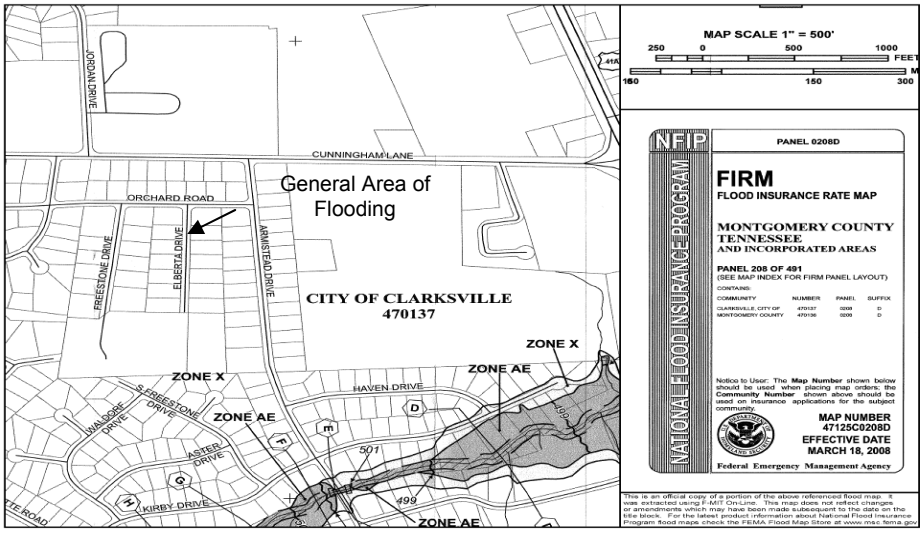
Flash flooding with its high, rapid volume of runoff damages infrastructure by undercutting roads; washing away road shoulders, ditches, and culverts; and by depositing debris and silt on transportation routes. All these factors may affect roadways and railroads within Montgomery County.

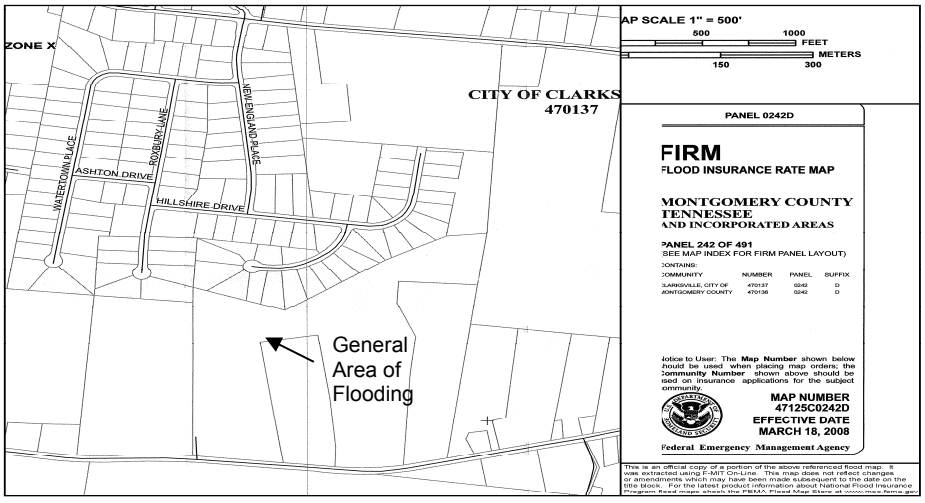
Montgomery County and the City of Clarksville both began participation in the National Flood Insurance Program in June, 1984. Using data generated from the APSU GIS Center based on parcels intersecting with the ‘100 year’ and ‘500 year’ flood zones from a FEMA flood zone overlay. The overlay yielded an intersection of 2,288 parcels in 100-year flood zones (2,035 residential and 253 non-residential) and an additional 322 parcels (271 residential and 51 non-residential) within the 500-year flood zone. Of these 2,610 parcels within the flood zone, only 189 NFIP policies were in effect within the city, and another 172 within the county.
According to information provided by FEMA as of June, 2009 there are currently 341 NFIP policies in effect for Montgomery County, including the City of Clarksville for a combined coverage of $80,676,800.00.
According to official records, there are Seven (7) properties in Montgomery County or the City of Clarksville covered by the NFIP that have experienced repetitive flood losses. The total of these losses is $238,154.44. The chart below illustrates the losses.

COMMUNITY NAME	OCCUPANCY TYPE	LOSSES	TOTAL PAID $
Clarksville	Single Family	2	13,667.28
Clarksville	Single Family	6	25,176.03
Clarksville	Single Family	2	87,690.34
Clarksville	Single Family	2	41,686.83
Clarksville	Non-Residential	2	14,417.82
Montgomery County	Non-Residential	2	19,558.94
Montgomery County	Single Family	2	35,957.20
TOTAL		**18**	**238,154.44**

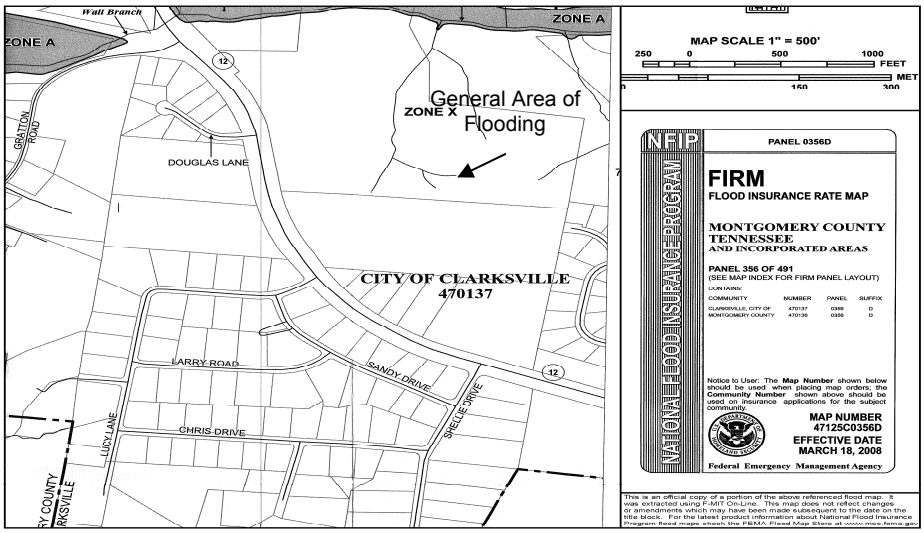
The following FIRMette Graphics from the FEMA Map Service Center show the general area of repetitive loss locations in Montgomery County or the City of Clarksville.

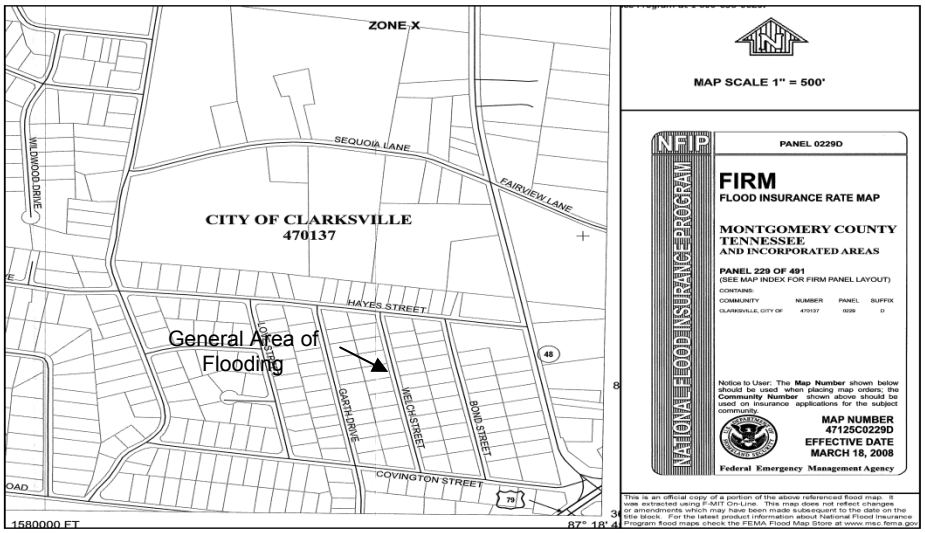
Repetitive Flood Events





Repetitive Flood Events





Consequences

For residential property owners, the consequences of flooding are potential exposure to mold, deposited pollutants, loss of access to personal property, economic diversion of disposable income for recovery expenses in lieu of normal living expenditures, loss of time from employment and expense for alternate living accommodations. And, for the non-residential property owner, there is loss of business, sometimes layoff for employees, loss of inventory, and recovery operations to manage.

For local governments, the most significant consequence is a diversion of resources away from normal use and the imposition of overtime pay related to maintenance and emergency operations (sandbagging, checking on pump stations, etc.). Limited school closures could be expected mainly due to road blockages, and possibly some minor flooding around facilities.

Loss Estimation

Estimation of the extent of damage in a local flood event is difficult due to the large land area covered and to the nature of local flood events. Segments of the county may experience 2 to 4 inch rainfall events where adjacent areas may have virtually no precipitation.

Given a worst-case scenario, with generally heavy rainfall over a prolonged period, the potential exists for as many as 2,306 residential parcels and as many as 304 other parcels in the floodplain to be flooded for at least one or more days. Due to the topographic character of the county, it is estimated that no more than 30% of the potential structures subject to flood damage would be affected in this scenario.

As discussed earlier, the damage to residences that is caused by the blockage or overloading of drainage systems is usually minor but still causes losses through overtime and materials expended by the street and highway departments in attempting to control the rising waters.

Estimation Rationale

Assumptions:

- 30% (692 of 2306 residential parcels, 91 of 190 non-residential) would be affected.
- Typical home is 1 story-no basement, valuation at $140,000.
- Typical business is 1 story-no basement, valuation $850,000
- Flood depth average 1 foot.
- 22% Flood Building Damage (FEMA Benefit–Cost Analysis Full-Data Module
- 21% Flood Contents Loss (FEMA Benefit–Cost Analysis Full-Data Module

Calculation:

Building Damage Loss:	692 x 140,000 x 0.22 equals	$21,314,000
	91 x 850,000 x 0.22 equals	$17,017,000
Contents loss:	692 x 140,000 x 0.21 equals	$20,345,000
	91 x 850,000 x 0.21 equals	$16,244,000
Total Loss Estimate		$74,920,000

Note that this loss estimate does not take into consideration costs for temporary shelter for dislocated residents, the value of functional downtime nor displacement time for affected businesses.

No human losses are projected for the flood event scenarios.

Mitigation Approaches

Mitigation options for flooding are of several forms. Flood control structures on the Cumberland demonstrate the effectiveness of major, long-term flood control measures. On a smaller, community basis however, the economics of such efforts do not have an apparent, similar cost-benefit. It is easier to control and restrict the use of the land in flood prone areas than it is to build and maintain dams and levees.

Warning signage, both of permanent and temporary nature in areas subject to runoff flooding have been and continue to be utilized to advise vehicle operators to be alert for flood conditions and standing water in roadways.
Placement of such signage is predicated upon years of experience and identification of flood prone areas, whether adjacent to riverine areas or in impoundment areas on “high ground.”

Continuous improvement in weather forecasting and local alerts and advisories via mass media (radio, cable, and broadcast television) has given local residents improved opportunity for watchfulness and personal planning. Special NOAA radio receivers are available to receive not only weather watches and warnings for the community as well as routine weather information from the National Weather Service Emergency Broadcasting System, but also all-hazards notifications. In 2004 the city installed an outdoor early warning system in large outdoor assembly areas (major parks and school stadiums) with voice advisories having the capability of giving advance warning of potential flood and flash flood conditions, as well as any other impending hazard. Driven by the National Weather Service information system with automated USGS stream gauging system data, anticipated flash flood warnings are available around the clock.

Land use planning conducted via the Clarksville-Montgomery County Regional Planning Commission, the City of Clarksville building and Codes, the Montgomery County Building and Codes Storm Water Division, flood plain mapping, and cooperative efforts from the risk management industry assure that proactive efforts to reduce or eliminate damage from flood events in our populated areas are aggressively pursued.

Rigorous zoning and permit enforcement by both city and county, and compliance with floodway management regulations are not only cost efficient, but they also contribute to maintenance of nature’s handiwork.
Both county and city permit issuance practices contribute to reduction of the potential for flood hazard damage. All county and city planning and permitting actions are analyzed to ensure that when permits are issued they will be in compliance with NFIP standards.
Any flood mitigation projects will be prioritized based on a benefit-cost analysis to maximize the benefits of each project based on the cost associated with it.

Other options available to mitigate damage from flood events include elevation of structures in flood prone areas. New construction requires such measures and both city and county permitting and codes enforcement units ensure this is the case.
Elevation of existing structures (such as the pumping stations and lift stations mentioned earlier) in flood areas can alleviate the potential for flood event damage. Relocation of structures or acquisition and demolition of subject areas and converting the areas into permanent public greenways, parks, and public use facilities are other options. At this stage, however, public funding has not been available for mitigation activities.

Research and Data Collection

Research on flood hazards has been conducted by the Army Corps of Engineers virtually since their creation. Likewise, colleges, universities, and the insurance industry have been instrumental in conducting and sponsoring research. As an outgrowth of these activities, numerous major projects have evolved, including such massive projects as dams, flood control reservoirs, improved agricultural practices to not only reduce erosion but to slow or even stop rapid runoff via conservation practices. And of course, the National Flood Protection Insurance program has been an outgrowth of the research activities for over 40 years.

For this plan, data were collected from a review of FEMA publications, National Oceanographic and Atmosphere Administration (NOAA) files, records from the US Geological Survey, the US Army Corps of Engineers, historical articles in the Leaf-Chronicle and historical publications, and recall of older residents of the community.

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FLOOD HAZARDS FROM INUNDATION DUE TO DAM FAILURE

In its 2007 annual review of the city's Local Hazard Mitigation Plan, the City of Clarksville review team noted that a significant condition had developed on the Cumberland River above the city when the Corps of Engineers reclassified the Wolf Creek Dam at Lake Cumberland, Kentucky, as being one of its five most at-risk dam structures from among the 610 that they manage. The Corps assessed the dam as having a high risk for failure due to a continuing and increasing seepage through the karst foundation base. This information precipitated a more intense review of local scenarios.

The flood risk assessment during the plan development stage in 2002 and 2003 reviewed the potential for flooding from upstream sources, but weighted rain and storm runoff events within the Cumberland and Red River watershed areas as the most likely source of flood events for The City of Clarksville, and Montgomery County. Upstream dam failures were reviewed, but not given significant weight due to the distance of the Wolf Creek Dam and the presence of flood control structures between Wolf Creek and Clarksville, Montgomery County. The team noted that the Wolf Creek Dam provided upstream flood control for the Cumberland and that other dam structures on major tributaries near their confluence with the Cumberland (Dale Hollow Dam – Obey River, Center Hill Dam – Caney Fork River, and Percy Priest Dam – Stone River) had been constructed to reduce major upstream flood water contributions.

Additional dam structures between Lake Cumberland and the City of Clarksville, Montgomery County on the Cumberland River were noted as structures designed for improving navigation but not useful for nor intended to be of value for flood control (Cordell Hull lock and dam, Old Hickory Lake lock and dam, Cheatham lock and dam).

The Wolf Creek Dam, built following passage of the Flood Control Act of 1938 and the River Harbor Act of 1946, was finally completed in 1950. It has been credited with saving hundreds of millions of dollars in avoided flood damage losses in its lifetime. Seepage was discovered under the dam in 1968 and following a grouting project completed in 1970 was considered to have been stabilized. In 1975, a cut-off wall construction project was initiated to prevent further seepage. That project was completed in 1979. What downstream units of local government were not aware of, and had no reason to suspect, was the continuing erosion of the karst base supporting the dam. In March 2005, excessive seepage again was identified by the Corps, and by the beginning of 2007, the risk status was changed, and major resources began to be applied to a remediation project.

The USACE has estimated potential for loss of as many as 100 lives and as much as $3 billion in property losses within the Cumberland system downstream from the dam, should the structure fail. To reduce the pressure on the dam, the Corps drew down the lake level to approximately 75% of its normal conservation pool and began a process of grouting cavities under the dam to impede seepage while major remediation construction work was underway. The timetable for project completion is in the 2012 to 2014 period.

The Wolf Creek Dam issue has served notice that any major dam/impoundment structure within the karst area of northern Tennessee and Southern Kentucky is subject to erosion, seepage, and potential failure.

Probability and Frequency

The probability of a major upstream dam failure within the karst subsoil strata of our region appears moderate, assuming no intervention and remediation. With intervention measures (conservation pool drawdown and implementation of remediation programs) such as those being exercised at Wolf Creek, dam failure is reduced, but not eliminated as a possibility.

The catastrophic flooding in the mid-west in 1993 was not expected nor was some flood protection measures which were in place adequate for a large number of sequential rainfall events within the upper and middle Mississippi River basin. Communities that had planned and had built flood control structures and levee protection systems for water and wastewater treatment, for example, were unable to protect the utilities. To illustrate, the Des Moines (IA) drinking water utility surrounded by an earthen levee and flood gates and with supplemental sandbagging was not capable of facility protection due to high water overtopping. The treatment plant was inundated and shut down with loss of the public water supply to approximately 700,000 persons for 10 days, including suburban communities served by the large drinking water utility. Ironically, some of the suburban communities which had relied upon well resources prior to connection with the centralized utility had maintained their well sources in spite of the central connection, and were subsequently able to bring them back on line and restore a local water supply not available to the central city.

While the pool level at Wolf Creek has been reduced and best intentions are to keep it so during the remediation construction, a series of abnormal and unpredictable rain events in the upper Cumberland watershed comparable to the 1993 Midwest events, could drive the pool to or beyond a structurally sound level and the feared breach and dam failure could occur.

Most dams fail when excessive rain causes the impounded lake waters to rise and overtop the dam, washing it out. A smaller number fail due to excessive seepage of water through the dam leading to the dam caving in and failing.

The historical frequency of dam failures in Tennessee and Kentucky appears relatively low. In its State Hazard Analysis in 2004, The State of Kentucky noted many frequent riverine floods and flash floods within its jurisdiction, with six small scale flash floods due to dam failure. Analysts noted that of the six dam failures each was a privately owned earthen dam, and most frequently was a facility constructed for the purpose of retaining mine tailing waste. The Kentucky plan presented dam failure as a limited potential hazard.

55 known dam failures that caused release of water have occurred in Tennessee in the past 100 years. An additional 21 dams have had partial failures which could have resulted in release of flood waters had remedial action not been taken. The most disastrous failure in the state occurred in 1916 when the John Thompson dam failed and killed 24 people. The dam was located on the Barren Fork River in Claiborne County, and its failure caused domino effect failures of five smaller dams downstream. The dam overtopped during a rainfall of 12-15 inches in five hours. Since 1973, 37 dams in Tennessee have failed, of which 33 were unregulated.

Although the major flood control dams above and within Tennessee are not regulated by the state since they are USACE structures, the history of dam failures due to excessive rain events or due to seepage show that such an event is possible, given an excessive rainfall event or closely spaced series of such events.

Both probability and frequency of dam failure of concrete structures are considered low, but possible.

Exposure and Impact

In assessing our vulnerability for a Wolf Creek or other upstream flood control dam failure event, the Austin Peay State University GIS Center and Montgomery County Emergency Management Agency produced inundation mapping for the alternate flood level scenarios developed by the Corps, using a new GIS/aerial photo database. The city and county are vulnerable to inundation flooding from one or more upstream flood control structure failures.

The extent of damage using the scale low, medium, and high where "low" equals minor curb-deep street flooding and "high" equals major flooding from the rivers above flood stage causing a dam failure. "High" would be the worst case scenario for all three jurisdictions.

Exposure to inundation flooding in the event of an upstream dam failure was evaluated by visual examination of relatively recent aerial photography overlain with the inundation maps. The Corps scenario for a Wolf Creek Dam failure assumes a series of rainfall events above Lake Cumberland that would drive the flood control pool to a maximum level, followed by a 100-year rain event. The scenario does not take into account any effects of rainfall events below the Wolf Creek dam areas of the Cumberland watershed below the dam, nor local river level/flood type conditions. They have only dealt with the watershed above and the dam itself.

Assuming the worst case situation as hypothesized by the Corps, the major impacts in the City of Clarksville, and Montgomery County, including the Clarksville-Montgomery County School System would be (1) inundation of the public wastewater treatment facility, (2) inundation of the raw water intake pumping station at the drinking water treatment facility, and (3) flooding (partial to total inundation) for as many as 50 residential structures, and 110 structures containing business and commercial enterprises located adjacent to the Cumberland River, Red River, and smaller tributaries that would be backed up by high water levels. Exposure in the county's rural areas would be primarily agricultural land and crops, rural roads, and surcharging of drainage systems. Inspection of the inundation maps revealed few structures other than agricultural use outbuildings. Additionally, the city and county are bisected by numerous bridges that would have to be inspected by city, county, state, and railroad engineers before they could be reopened. The inspection process for the bridges will cause a major disruption of vehicle and rail traffic.

Fortunately, as it may be, a Wolf Creek Dam or any other flood control structure failure would allow sufficient advance notice due to distance upstream from the City of Clarksville and Montgomery County to enable evacuation of residents, livestock, and elevation or removal of some personal property prior to flooding. This particular type of flood event would not be characteristic of a flash flood, with little notice, since the release of water is approximately 320 'river' miles upstream from the city. The City of Clarksville, and Montgomery County would not see a river-level change for

approximately four (4) days following a Wolf Creek failure. Consequently, no loss of life is anticipated for this type of event.

The greatest vulnerability is loss of utility lifelines, most notably the water intake for the potable water treatment facility and the wastewater treatment plant processing capability. The drinking water utility produces a supply of approximately 13 million gallons of treated water daily.
An approximate discharge of 65-80% of that flows into the wastewater system in addition to runoff storm water collected within the combined sewer system.
Topographically, the wastewater system cannot depend totally upon gravity to move wastewater to the treatment facility and a major system of lift and pumping stations are key to the operation of the system.

Given a flood elevation of 412 feet above mean sea level (USACE worst case scenario is 397' +/- 15'), the following lifeline facilities, and structures would most likely be affected:

183 potable water system valves
30 wastewater pump stations
134 fire hydrants
764 manholes
465,000 feet of water mains
225,000 feet of gravity sewer mains
212,000 feet of force mains
Flooding of the water intake pump station at Water Treatment Plant (WTP)
Possible loss of electrical power at WTP
Possible loss of electrical power to water booster stations
Water/sewer main breaks in inundation area
Inundation of the Wastewater Treatment Plant
50 residences
110 commercial structures

Consequences

The loss of availability of potable water is difficult to fathom for anyone who has not endured other than a brief interruption of water service, such as when maintenance work is done in a neighborhood when a water main requires service or repair.

With no free-flowing water supply, virtually all residential water uses would be curtailed or significantly diminished such as availability of drinking and cooking supplies, bathing, dishwashing, laundry, toilet flushing. Food service businesses would be closed as would bakeries, and food processing enterprises. Schools, colleges, day care facilities would be closed, as would many businesses and governmental units with large workforces. Industrial operations which use treated water for processing would be unable to continue functioning. Medical facilities would be forced to cut back to critical, emergency operations. Fire suppression would have to depend upon tanker water supplies drawn from ponds, pools, and floodwaters.

Loss of the wastewater treatment plant and a number of the pumping stations required to lift low area wastewater to higher elevations for the gravity-based section of the system to function would mean inability to process wastewater through the sanitary sewer system.

Loss Estimation

Loss estimation for residences and non-residential structures was discussed in the preceding section. For inundation flooding due to dam failure, the discussion will focus on the economic impact of the loss of the two utilities.

Utility loss impact is greater than the cost of the commodity or the service. The direct economic impact of loss of utilities on the functioning of a modern community has been estimated by several federal agencies using nationwide data. The key point made in the economic impact studies was that there is an economic value to the major disruption of normal activities that result from the loss of a utility – people's time has economic value whether it is devoted to remunerative work or to leisure pursuits.

The simplest concept is that that time has the same value, regardless of how any individual spends it. Following a model established by the USDOT, an average compensation rate (wages and benefits) is the best evaluative measure of the economic value of people's time.

These values are applied to both the impact on the "region" and impact on individuals.

Potable Water Supply

For a potable water supply, the loss contains two components –loss of water "safe for drinking" and loss of wastewater treatment. FEMA preparedness guidelines are at least one gallon of drinking water per day/person. Based on a family size of four people the cost economic Impact on residential customers is estimate $4/day/family. The total cost per day/family for drinking water supply for a family of four would be $4.

Wastewater Treatment

A similar analysis was applied to the loss of wastewater treatment and the need for an alternate method of human waste disposal. The rationale was that industrial operations would be non-existent during wastewater treatment plant shutdown, and the fact that residential customers would have to be provided with another sanitary source for waste disposal. Portable toilets provided under Red Cross requirements of 1 portable toilet per 40 people due to the total loss of waste treatment capabilities would be a worst case scenario. Using a local cost per/day of $3 per toilet, plus $12 per day for service for a total of $15 per day for 40 people. Using a population figure of 154,000 divided by 40 people would indicate a need for 3, 850 portable toilets. The total cost per day for sanitary waste disposal would be $57,750.

Estimation Rationale

The unknown in the loss equation for this plan is the number of days between the onset of utility loss and the resumption of partial service followed by full service. An assessment of a dam failure in the presence of local rainfall contributions to the flood versus dam failure with no local runoff contributions is impossible to predict.

It is estimated that we might expect disabling exposure from the flood conditions for a period of 7 to 10 days. Flood conditions on the Cumberland River tend to moderate fairly quickly, when the drainage system is not surcharged. Another element in the mix is what effect (the downstream) Lake Barkley Dam would have on the city and county areas in terms of retaining floodwaters. Both are within the defined footprint of the Barkley flood control pool.

1. A maximum flood control pool at Lake Cumberland (Wolf Creek Dam) would be released by dam failure, impacting Clarksville, and Montgomery County with a flood elevation of 397 feet above mean sea level (USACE worst case scenario estimate with +15 foot standard error of estimate). This would, under current conditions, result in inundation flooding of the Clarksville Wastewater Treatment Plant, the lower pump house (raw water intake station) of the Clarksville Water Treatment Plant, and flooding of approximately 30 wastewater pump/lift stations.

2. The population of Montgomery County is slightly over 154,000, based on 2008 estimates from US Census data.

3. Inundation period: 5 days full loss of service, 5 days unsafe drinking service, or waste disposal.

4. Economic Impact for drinking & cooking/cleaning water, and sanitary human waste disposal:

a. Potable water (none):	5 x 154,000 x $1.00	equals	$770,000.
b. Waste disposal (full shut down):	5 x $57,750	equals	$288,750.
Estimated total economic impact from total water loss:		equals	$1,058,750.

5. Property Losses:

The wastewater plant consists of 34 structures, of which 16 are “buildings” and 18 are liquid storage/processing “tanks.” Virtually all of the structures are constructed of masonry and reinforced concrete and most likely would not be destroyed by immersion in flood water. However, all of the buildings include some inventory of electrical service and/or electronic controls, motors, monitoring equipment, and devices which could be impacted by exposure to flood waters. It is virtually impossible for this assessment to estimate the loss of moisture sensitive items. Some devices could be placed back in service with minimal maintenance attention, while others might require full replacement to restore plant functions.

Assuming that no structural replacement would be required, losses for this assessment are restricted to contents, as a relationship to the value of the structures which house them. The 16 “buildings” have a current replacement value of $4,715,000 according to the latest risk management appraisal that was completed in January 2006.

Pumping stations, also, are constructed for the most part of masonry and reinforced concrete, and most likely would not be destroyed simply by inundation. The controls, motors, and pumps, however, along with the electrical service into and within each station could suffer from the exposure. Typical pumping and lift stations vary in replacement value from $150,000 to $1.8 million (structure, well, pit pumps and controls). 29 such stations at an average value of $210,000, plus the $1.8 million facility represent another $7,890,000.

Total replacement value of the plant structures with inundation exposure is $4,715,000 + $7,890,000, or $12,605,000. Assuming the value of damage to internal, vulnerable devices and components is 21% of the value of the structure with contents, the exposure to loss becomes $12,605,000 x 0.21 equals $2,647,000.

The economic loss based on retail sales for a 5 day period would be $27,772,070 million based on Tennessee County Data figures which break down to $5,554,414 million per day X 5 days.

This event, if to occur, would generate the following loss in terms of actual physical loss and negative economic impact:

Economic impact loss:	$ 27,772,070 million
Property Loss	$ 2,647,000 million
Loss of water	$ 1,058,750 million
Total	$30,419,071 million

Mitigation Approaches

In as much as our utilities are unable to relocate as a method of avoiding hazards, the options become fewer. Additionally, elevation of sewer treatment structures, which need to be at the lowest point in a treatment system, is not an option. Elevation or construction of an alternate lower pumping facility for the potable water plant is an option.

The remaining alternative is the construction of flood protection structures. For the wastewater treatment plant, this would consist of a floodwall (as high as 24 feet in some sections of the plant grounds) with access through floodgates. For some of the pumping stations, additional permanent floodwall structures may be indicated, where for others, bladder-style flood barriers could provide temporary, but effective protection.

Research and Data Collection

Information assembled for this risk assessment was garnered from a variety of resources, including a special internal study conducted by the City Engineer, Clarksville Gas and Water Department. Additional information was obtained from a review of the Kentucky State Hazard Analysis (2004), State of Tennessee dam monitoring reports, US Army Corps of Engineers public documents, FEMA risk assessment publications and planning guidance, the Montgomery County Emergency Management Agency, Austin Peay State University GIS Center, and related internet-based resources.

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Community Data sheets from the Tennessee Department of Economic and Community Development website

Are You Ready, FEMA IS22,

SEVERE STORMS
TORNADO/ WIND STORMS
WINTER STORMS

Montgomery County (Including the City of Clarksville, and The Clarksville-Montgomery County School System) is located just northwest of Nashville, Tennessee on the Kentucky/Tennessee border. This places us in Zone IV (highest level) of the FEMA Design Wind Speed Map for structural design of community shelters, as shown below.

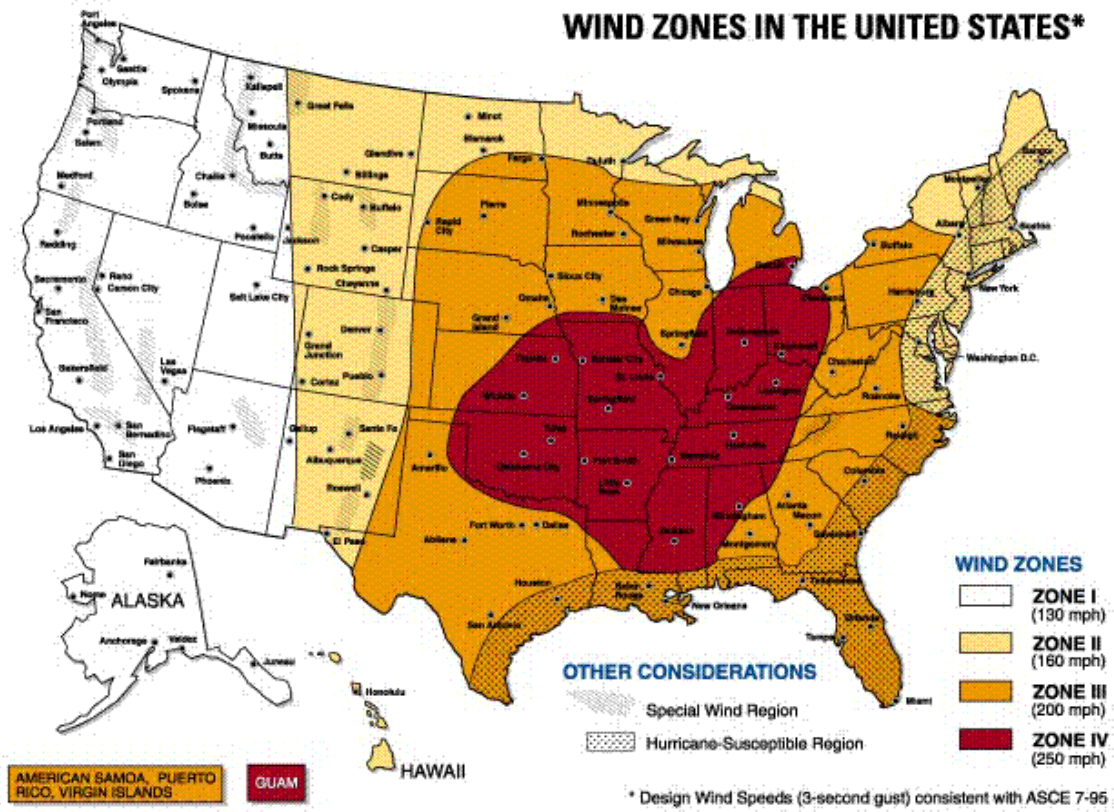


Figure I.2 Wind zones in the United States

Climatology records indicate 19 tornadoes have been recorded in Montgomery County (Including the City of Clarksville, and The Clarksville-Montgomery County School System) since January 1, 1950. Of these tornados, 6 were graded F0, 8 were F1, 3 were F2, and 2 were F3. The total damage from these events is 75.595 million dollars. The January 22, 2009 F3 tornado that struck downtown Clarksville, and areas within Montgomery County produced 72.7 million dollars in damages.
Four of the EF1 tornadoes struck on the same day on May 2, 2008 causing damage in the county and the city.

Note: The May 2, 2008 tornados were classified with the enhanced fujita scale that went into effect on February 1, 2007. The EF5 tornado would be the worst case scenario for all three jurisdictions.

A graphical plot of the locations of tornados which have struck the county shows that the preponderance of the events have been located in the southern half of the county (it should be noted that the amount of damage in the southern half of the county comprises a very small percentage of the damage from these tornadoes due to the rural nature of the area and less dense industrial concentration. Storms with damaging winds showed no preponderance to any particular area.

From January, 1950, through May, 31, 2009, the County (Including the City of Clarksville, and The Clarksville-Montgomery County School System) experienced 160 thunderstorm and high wind events, with cumulative damage estimated at $2,195,000. It is believed that tornadoes or severe wind damage in the rural and sometimes rugged southern sections of the county may have gone unreported until the early 1980's when the county began to experience a building boom. Longtime residents of these areas support this supposition.

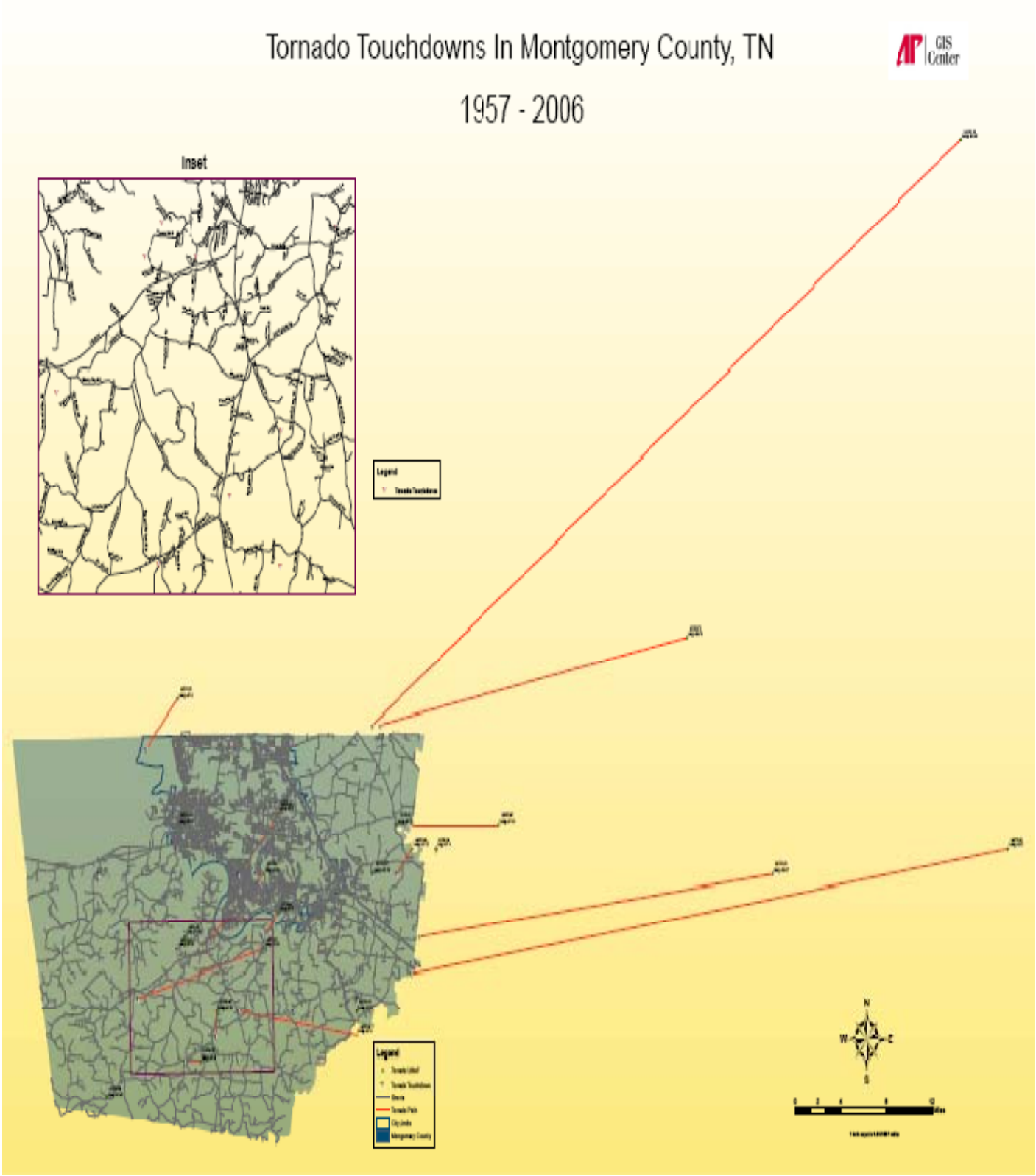
Probability and Frequency

Based on the historical data, damaging wind storms can be expected to occur six to eight times annually within the jurisdictions. The most "busy" season for damaging winds is the May-June-July period, with the peak occurring during June.

Local tornado events, based upon historical frequency over the past 59 years, leads to a prediction of a tornado in the county on the average of once each 3.1 years. However, in some years and even on some dates (such as May 5, 2008) multiple occurrences occur.

FUJITA SCALE			DERIVED EF SCALE		**OPERATIONAL EF SCALE**	
F Number	Fastest 1/4-mile (mph)	3 Second Gust (mph)	EF Number	3 Second Gust (mph)	**EF Number**	**3 Second Gust (mph)**
0	40-72	45-78	0	65-85	**0**	**65-85**
1	73-112	79-117	1	86-109	**1**	**86-110**
2	113-157	118-161	2	110-137	**2**	**111-135**
3	158-207	162-209	3	138-167	**3**	**136-165**
4	208-260	210-261	4	168-199	**4**	**166-200**
5	261-318	262-317	5	200-234	**5**	**Over 200**

***** IMPORTANT NOTE ABOUT ENHANCED F-SCALE WINDS:** *The Enhanced F-scale still is a set of wind estimates (not measurements) based on damage.* Its uses three-second gusts estimated at the point of damage based on a judgment of 8 levels of damage to the 28 indicators listed below. These estimates vary with height and exposure. **Important**: The 3 second gust is not the same wind as in standard surface observations. Standard measurements are taken by weather stations in open exposures, using a directly measured, "one minute mile" speed.


Tornado Touchdowns In Montgomery County, TN
1957 - 2006
GIS Center
Inset
Legend
Legend
N
W
E
S

January 1999 Tornado Damage

Exposure and Impact

As the county (Including The City of Clarksville, and The Clarksville-Montgomery County School System) becomes more urbanized and more subdivisions are developed, the “windbreaks” planted or that occurred naturally have been replaced by rows of residential structures. The mature, aging trees which are left in place often are more susceptible to damage from winds without the partial protection from brush and smaller trees.

A second factor contributing to damage from wind events is the widespread use of mobile homes. Data shows that the rate of loss for residential structures is twice as high for mobile homes as it is for site-built homes. Residents of mobile homes are at greater risk since these homes do not withstand high wind speeds as well as permanent, site-built structures due to the nature of their construction, and antiquated anchoring methods. Hurricane proof anchoring systems have been developed, but a tiny percentage of local mobile homes have had this technique applied.

The extent of damage based on The Enhanced F- Scale and EF5 tornado would be the worst case scenario for all three jurisdictions.

Consequences

The damage from a tornado or severe thunderstorm varies from trees in roadways to entire homes demolished. They can leave a community without power and interrupt other utilities.

During the 1999 F3 tornado which hit all three jurisdictions, buildings were ripped from their foundations causing gas and water lines to break and leak. This added another element to an already hazardous situation.

The impact of these storms or tornadoes on people's lives must also be taken into account, in addition to the destruction of buildings and infrastructure. During the 1999 tornado there were no deaths and 5 minor injuries yet a 2002 F1 tornado caused the deaths of two citizens who resided in a mobile home. The preponderance of mobile homes in some areas of Montgomery County could prove deadly were a tornado or severe storm to strike.

Loss Estimation

Tornadoes which have occurred in the last few years caused property damage ranging from $10,000 to the central city devastation at $118 million. Our history of damage from the smaller tornados has averaged $185,000 per event. Excluding one major windstorm event with $1 million in damages, other severe thunderstorm events in the past 10 years have caused average per event damage $41,000.
All tornadoes and storms have caused damage such as downed trees, power lines, and debris covering roadways. Overtime and equipment costs were incurred during the clean-up of these items.
Loss estimations in terms of vulnerability to damage from tornados and wind storms are virtually impossible to classify based on any type of scale such as the hundred year flood plain that limits the scope of damage to a predictable geographic location, along with a known amount of buildings, critical facilities, and transportation and utilities within that geographic area. The only damage values that are reliable are the cost of replacement or repair of private property and government facilities / infrastructure after the event. The only way to provide a plausible estimate of damage for an event is to use a worse case, total destruction scenario.

HAZUS MH information summarized in the following paragraphs for buildings, critical facility, and transportation and utility lifeline inventory was used as a basis to define worst case scenario replacement values as our loss estimation.

Building and Lifeline Inventory

Building Inventory

HAZUS estimates that there are 52 thousand buildings in the study region with an aggregate total replacement value of $8,928 million.

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Transportation and Utility Lifeline Inventory

Within HAZUS, the lifeline inventory is divided between transportation and utility lifeline systems. There are seven (7) transportation systems that include highways, railways, light rail, bus, ports, ferry, and airports. There are six (6) utility systems that include potable water, wastewater, natural gas, crude & refined oil, electric power, and communications.

The total value of the lifeline inventory is over $1,934 million. This inventory includes over 263 kilometers of highways, 64 bridges, and 6,363 kilometers of pipes.

Summarizing, this totals $8,928 million in building inventory, $1,934 million in transportation and utility lifeline inventory, for a $10,862 million total inventory value

Future buildings, infrastructure, and critical facilities estimated to increase 7% during the next 10 years based upon current industrial, commercial, public infrastructure and residential growth trends suggested by the regional planners and industrial development consultants

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Current total inventory x 7% future growth in inventory after 10 years = $761 million

Current total inventory $10,862 million + future growth in inventory $761 million = future total inventory replacement cost of $11,623 million.

Mitigation Approaches

Three predominant strategies exist as key measures for mitigating life and property losses associated with wind events. The first is regulatory in nature and includes land use planning and zoning -- including reduction of building density -- and the subsequent adoption, enforcement and compliance of appropriate codes to assure that construction standards resistant to thunderstorm winds, wind shear, and tornadic events are in place. Montgomery County has adopted the 2003 International Code Council Building Codes. These codes require buildings to be designed and built to withstand wind speeds of 90 MPH.

Second, is an aggressive public awareness program of the dangers of wind hazards and the self-help options available to home owners to reduce their vulnerability and the possibility of damage to their personal property, as well as the over-the-shoulder information resources that are available to the public in the form of storm tracking and weather advisories. The electronic siren/warning system project developed by the city with TEMA assistance augments public awareness of impending destructive storm watches and warnings.

The third approach is the design and construction of shelters, whether personal or community shelters, for protection from wind events. Unfortunately, even with recent events involving fatalities, public outreach and education, the community is generally uninformed about tornado and strong wind protection.

There is little difference in the mitigation approaches for tornado events and severe wind events. Of primary consideration is the insistence upon quality construction practices and an aware, informed population.

Research and Data Collection

NWS, NOAA, and various internet sources were reviewed to obtain the risk data for this hazard category.

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WINTER STORM HAZARDS

Montgomery County (Including The City of Clarksville, and The Clarksville-Montgomery County School System) generally has mild winters but property damaging winter storms do occur. Much of this can be attributed to our location on the Northern border of Tennessee and the proximity to one of the major jet streams of the United States which carries arctic air southward into the United States.

Probability and Frequency

From February 21, 1993 through May, 2009, Montgomery County experienced 20 significant snow and ice events. Some years multiple storms hit while some have none. An average of one major winter storm per year can be expected.

A recent event that began on December 22, 2004 dumped nearly 5 inches of an ice/snow mixture, followed by additional fresh snow. Temperatures remained in the twenties and teens for much of the next week which kept the ice and snow on the ground and on the streets. Road salt and brine were ineffective on ice with temperatures below 28 degrees Fahrenheit so roads and streets remained virtually impassable for nearly a week. Only after temperatures climbed above freezing on December 29 did roads become passable and safe again. There were numerous reports of garages and other outdoor structures collapsing under the weight of the ice and snow. Luckily no residences were damaged significantly.

Exposure and Impact

Due to the nature of this hazard the entire County is exposed to this hazard, including the City of Clarksville, and the Clarksville-Montgomery County School System.

The following is the terminology used by the National Weather Service to classify the strength/hazard potential of winter weather.

Winter Weather Advisory- Issued when 4 to 6 inches of snow or sleet is expected in 24 hours; or any accretion of freezing rain or freezing drizzle is expected on road surfaces; or when blowing or drifting snow is expected to occasionally reduce visibility to 1/4 mile or less. It is expected to create hazardous or restricted travel conditions, but not as severe as expected with a winter storm.

Winter Storm Watch- A significant winter storm may affect your area, but its occurrence, location, and timing are still uncertain. A winter storm watch is issued to provide 12 to 36 hours notice of the possibility of severe winter weather.

Winter Storm Warning- Issued when 7 or more inches of snow or sleet is expected in the next 24 hours, or 1/2 inch or more of accretion of freezing rain is expected. This may lead to dangerous walking or driving conditions and the pulling down of power lines and trees. A warning is used for winter weather conditions posing a threat to life and property.

The extent of damage using the weather terminology classification as a damage scale with a Winter Weather Advisory equals the low end of the scale and high equals a Winter Storm Warning. The Winter Storm Warning would be the worst case scenario for all three jurisdictions.

Besides the obvious impact of ice and snow there is often the problem of accompanying high winds that causes drifting and later, flooding once melting begins. Areas prone to flooding are then inundated with the melt off from the remaining snow and ice.

Consequences

Loss of utilities is not unusual during these winter storms. Common causes are falling trees and large branches from the weight of the snow and ice, frozen pipes, and ice accumulation on overhead utility lines. Repair crews are slowed by road conditions as the Street and Highway Departments work to clear the roadways.

Transportation also becomes a problem during these storms. The general public is unable to operate as they normally do thereby causing a negative impact on the local economy due to their being unable to report to work and inability to go about their normal business.

Due to the distances traveled by salt trucks and snowplows significant time is added to getting roads cleared or treated and reopened. Experiments with stockpiling salt in school parking lots with impending storm announcements have proven to be ineffective and too costly.

Response times of emergency services are also affected by these storms. Response times are extended due to road conditions and the danger of running emergency traffic is multiplied many times over.

Loss Estimation

Losses in utility operation and in transportation are difficult to estimate. Interruption of these services affects so many variables it is nearly impossible to calculate. Losses to commerce and industry can be substantial due to reduced workforce availability during and following the storms (i.e. – transportation difficulties) and possible utility losses (water, electricity, natural gas, etc.).

The 20 notable storms of record caused property damage ranging as high as $1.5 million and totaling $3.026 million. Average losses from these storms were $168,000 in property damage, plus uncalculated valuation of road and street crew overtime and equipment operation costs. Because our community is not plagued with numerous recurring winter storms annually, neither the city nor the county has extensive snow removal equipment inventories and under some circumstances is forced to sub-contract roadway clearing with private contractors on an emergency basis.

Loss estimations in terms of vulnerability to damage from winter storms are virtually impossible to classify based on any type of scale such as the hundred year flood plain that limits the scope of damage to a predictable geographic location, along with a known amount of buildings, critical facilities, and transportation and utilities within that geographic area. The only damage values that are reliable are the cost of replacement or repair of private property and government facilities / infrastructure after the event. The only way to provide a plausible estimate of damage for an event is to use a worse case, total destruction scenario.

HAZUS MH information summarized in the following paragraphs for buildings, critical facility, and transportation and utility lifeline inventory was used as a basis to define worst case scenario replacement values as our loss estimation.

Building and Lifeline Inventory

Building Inventory

HAZUS estimates that there are 52 thousand buildings in the study region with an aggregate total replacement value of $8,928 million.

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For essential facilities, there is 1 hospital in the region with a total bed capacity of 179 beds. There are 42 schools, 2 fire stations, 4 police stations, and 0 emergency operation facilities. With respect to HPL facilities, there are 2 dams identified within the region but neither is classified as ‘high hazard’. The inventory also includes 21 hazardous material sites, 0 military installations, and 0 nuclear power plants.

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Mitigation Approaches

One mitigation approach for winter storm hazards is the adoption and enforcement of building codes and regulations designed to reduce losses in new and retrofit construction whether they be structures or utility infrastructure. Enforcing the building codes relative to snow loads and wind loads for the area would be a cornerstone of any mitigation for this hazard.

Another approach to address snow and ice removal during and after winter storms would be the construction of salt sheds throughout the County and City. This would significantly reduce the distances that these trucks currently travel for supplies thereby reducing the time available to clear the roads and streets. This would have the added benefit of reduced overtime and fuel costs during these storms. (NOTE: More salt sheds would require coordination with storm water management personnel to prevent inadvertent pollution of area waters.)

Research and Data Collection

NWS, NOAA, and various other weather-related internet sources were reviewed to obtain the risk data for this hazard category. Officials with street and utility maintenance were interviewed about the impact that these occurrences have upon their respective Departments.

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NOAA. Glossary. Terms used by meteorologists, forecasters, weather observers, and in weather forecasts

EARTHQUAKE HAZARDS

No portion of the United States is immune from the potential for an earthquake hazard. Geologic hazard maps of Tennessee indicate that while no earthquakes of substance have occurred in the three jurisdictions, we would feel the results of events elsewhere such as the massive earthquakes of December 1811 – February 1812 in the New Madrid Seismic Zone, approximately 120-130 miles due west of Clarksville.

Different scales have been developed to measure seismic activity. The Richter Scale is used to measure magnitude and is reported in whole numbers and decimals ranging from 1 to 10. For example, a quake with a magnitude of 5.0 is classified as a moderate event. The major earthquakes of the New Madrid events are estimated to have ranged from magnitude of 7.0 to a magnitude of 8.6.

The effect on the earth's surface of an earthquake is called the intensity. This scale (the Modified Mercalli Intensity scale – MMI) is arranged in 12 different levels from imperceptible to catastrophic. The New Madrid quakes were estimated to be in the X to XII range. With an intensity of V, for example, nearly everyone would feel the quake, some dishes, and windows may be broken, and unstable objects would be overturned.

Geologic studies indicate that three jurisdictions appear to sit in the center of an "island" in relation to the surrounding regions which have faults. There is one small, inactive fault near the north edge of Montgomery County, and two other fault structures nearby. The largest is the Wells Creek Structure near the southwest corner of the county, and the other is a single fault line running southwest to northeast just north of Nashville. The fault lines in the Wells Creek site are resultant of a meteor impact.

Illustration 1, that follows locates the areas of faults within Tennessee. Those in the western section of the state are active, while those in the eastern section are inactive.

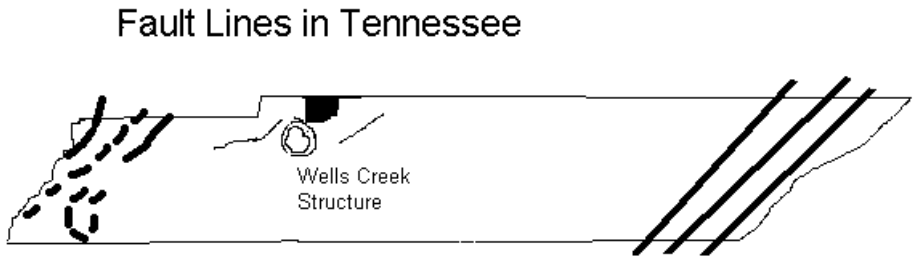


Illustration 1. Proximate Fault Lines in Tennessee

Probability and Frequency

A review of the mass of literature on the rate of occurrence of earthquakes in the Montgomery County (Including The City of Clarksville, and The Clarksville-Montgomery County School System) area shows little evidence that we can “look forward” to such an event centered here, although historical records indicate that Clarksville was at the epicenter of a small earthquake on April 3, 1924, with a Mercalli rating of III-IV. People indoors may have felt this event, while most who were outside may not have even noticed it. The greatest likelihood of an event that might impact the county is a recurrence of a major event in the New Madrid Seismic Zone, rather than a new event in our own community.

There is broad agreement in the scientific community that a continuing concern exists for a major destructive earthquake in the New Madrid seismic zone. There are published reports based on GPS instruments with results of geodetic measurements of strain in the Earth’s crust that indicated the New Madrid seismic zone may be shutting down. A USGS workshop of experts convened in 2006 to evaluate the latest findings of earthquake hazards in the Eastern United States. The experts did not find the GPS data to be a convincing reason to lower the assessment of earthquake hazard in the New Madrid region, especially in light of the many other types of data that are used to construct hazard assessments. Based on (USGS Fact Sheet 2009-3071) Based on this history of past earthquakes, the USGS estimates the chance of having an earthquake similar to one of the 1811–12 sequence in the next 50 years is about 7 to 10 percent, and the chance of having a magnitude 6 or larger earthquake in 50 years is 25 to 40 percent. (USGS Fact Sheet 2009-3071)

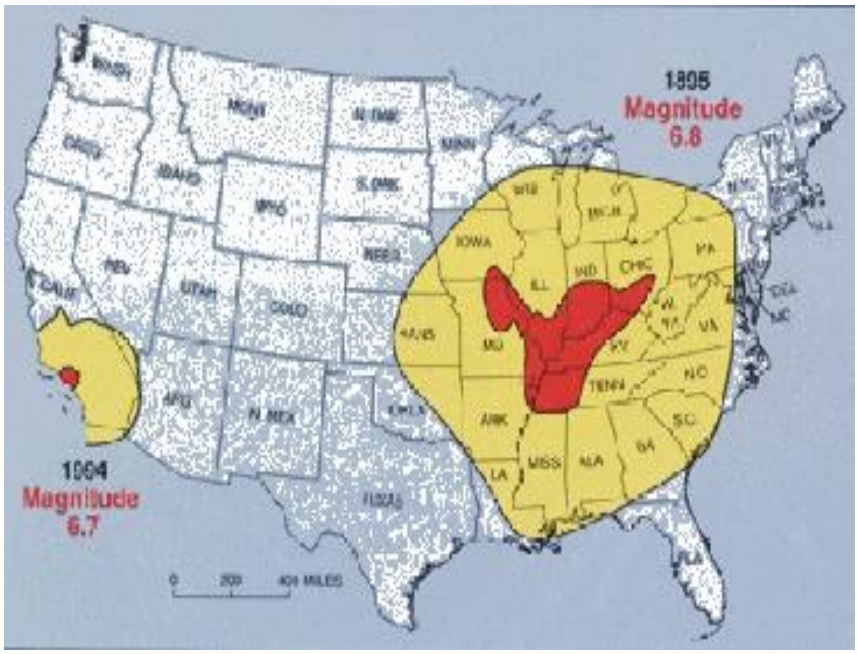
Exposure and Impact

The New Madrid events of the early 1800s saw little if any damage to property, primarily because the area was not heavily populated. St. Louis, for example, was just a small frontier settlement at the time, and there was virtually no development beyond the settlement/village in any part of the territory. Today, however, a repetition of the New Madrid, or a new event nearby, would have much different consequences.

The extent of damage using the Richter Scale of 1-10 would indicate that 7.0 would be the worst case scenario based on current hazard maps for all three jurisdictions. In reality the damage caused to the multi-state regional transportation, electrical, and emergency response infrastructure alone by an earthquake of magnitude 8 along the New Madrid Fault could cause catastrophic consequences.

The seismic hazard in the Central United States is relatively low due to the infrequency of large magnitude earthquakes. However, the seismic risk is considerable due in part to the lower attenuation of soil and rock in this region, the sometimes inadequate enforcement of seismic building codes, and the lack of earthquake preparedness. What makes an event here different from the West Coast is that the Mississippi basin faults are buried under sedimentary deposits as much as a mile deep allowing seismic waves to travel up to 20 times further than in California which has firm rock sub-soil strata.

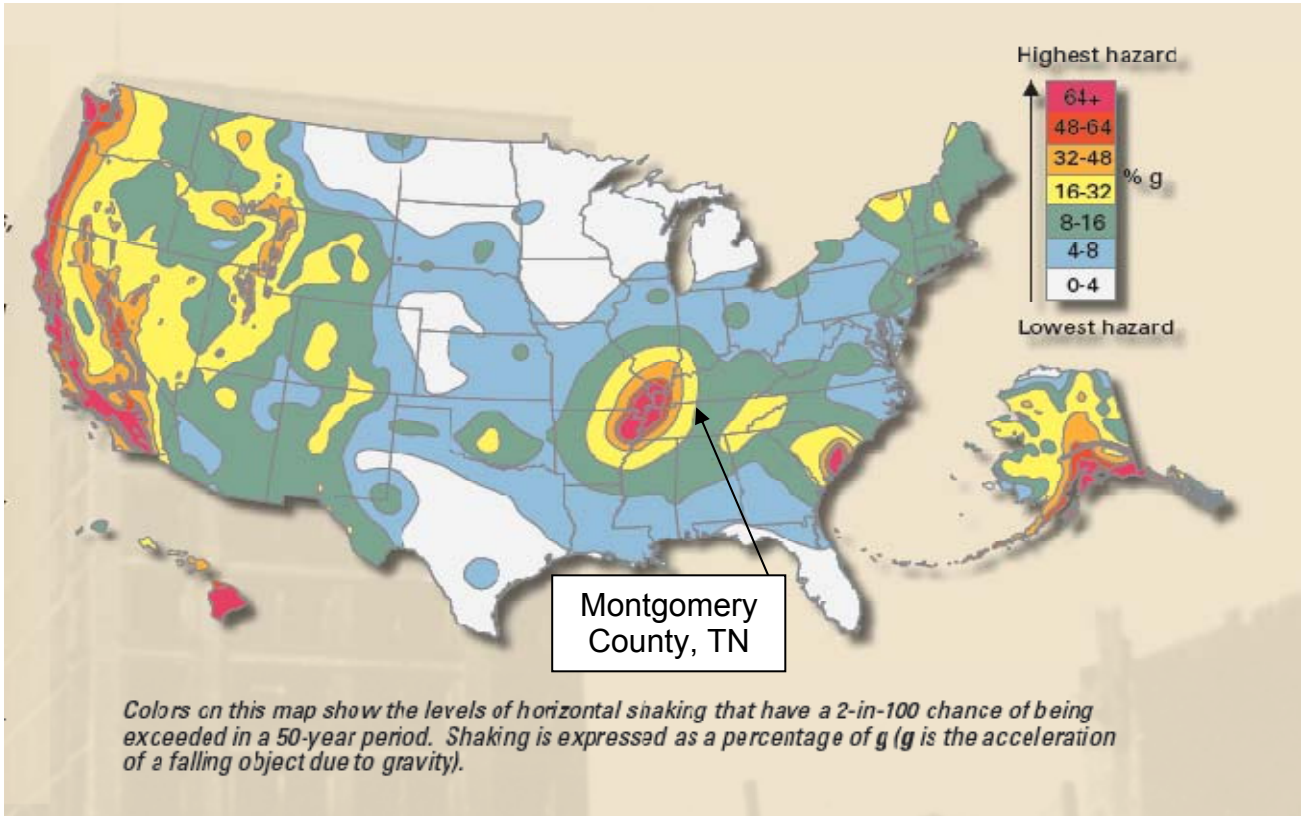
The map below compares seismic wave travel from a Magnitude 6.7 earthquake which occurred in San Francisco in 1996 and a Magnitude 6.8 earthquake which occurred in the New Madrid Seismic Zone in 1895.



Montgomery County (Including The City of Clarksville, and The Clarksville-Montgomery County School System) is located in a seismic risk zone classified by the United States Geological Survey as being at Medium Risk from a New Madrid earthquake. The Geological Survey's National Seismic Hazard Mapping Project places most of the county in the 8% to 16% Peak Acceleration boundary zones, while the extreme western portion of the County is in the 16% to 24% zone.

USGS
science for a changing world

2008 US National Seismic Hazard Map



To consider the potential impact of an earthquake to be negligible would be foolhardy, if simply based upon the premise that it has never happened in the past. Whether the county is located in a minimal risk zone or in a high risk zone is less important than recognizing that the entire county is at risk to the effects of a significant earthquake event.

Consequences

A large magnitude event could directly affect more than 50% of the state's population. A 7.5 magnitude event somewhere along the New Madrid Seismic Zone would be felt across the entire region and would cause significant damage across most of the western 2/3 of the State. Scientists estimate that the probability of a magnitude 6.0 or larger earthquake occurring in this seismic zone within any 50 year period is 25% to 40%. (USGS Fact Sheet/2006/3125). The following table shows potential Mercalli ratings for various New Madrid earthquake events.

Figure 2

New Madrid Event Richter Scale Rating | Mercalli Rating for Montgomery County

6.5	VII
7.5	VIII
8.5	IX

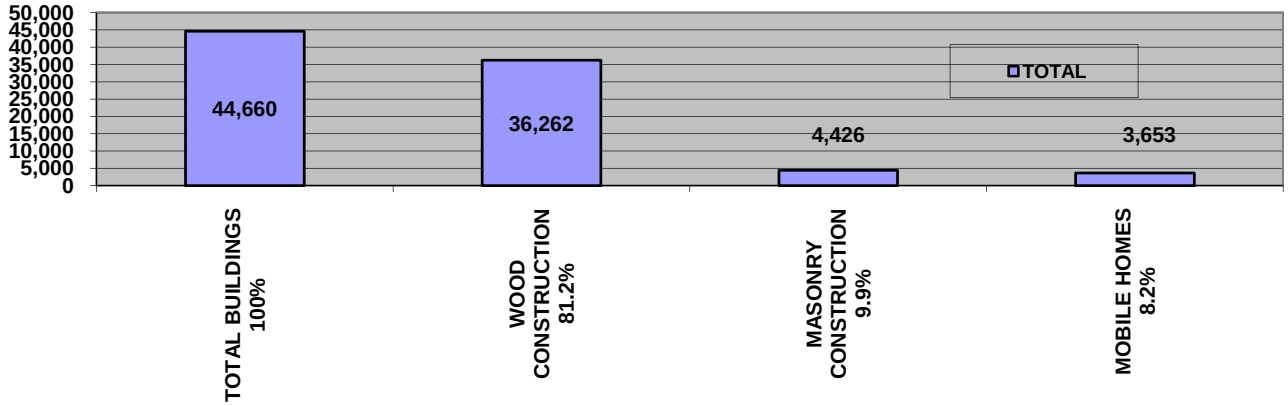
Mercalli VII = nonstructural damage; waves on ponds, small slides and caving in along sand and gravel banks, difficult to stand, noticed by motorists, furniture broken, hanging objects quiver, concrete irrigation ditches damaged

Mercalli VIII = moderate damage: steering of cars affected, damage to masonry, frame houses damaged if not bolted down, branches broken from trees, cracks in wet ground or steep slopes, changes in flow of springs and wells; twisting and falling of chimneys, factory stacks, monuments, towers, elevated tanks.

Mercalli IX = heavy damage: general panic, masonry destroyed or seriously damaged sometimes with complete collapse, frame structures shifted off foundations if not bolted down, serious damage to reservoirs, underground pipes broken, conspicuous cracks in ground, sand and mud ejected form alluvial areas, earthquake fountains and craters form

*Information provided by TEMA

The possible damage to wood and masonry structures is of particular concern. The following table is derived from HAZUS-MH inventory data:



Loss Estimation

As can be seen in the preceding chart, the majority of buildings within Montgomery County (Including The City of Clarksville, and The Clarksville-Montgomery County School System) are of wood and masonry construction. Calculations taken from HAZUS-MH also show that 99.04% of all buildings within the County are residential occupancies (single family, apartments, duplexes, etc.). From these calculations it is easy to deduce that the majority of the wood and masonry construction buildings are residential, adding to the probability of lives endangered particularly if a quake were to occur outside of normal working hours when residences have their lowest occupancy level.
Drawing upon a worst case scenario of a massive quake striking in the New Madrid Seismic Zone outside of normal working hours we could also expect high financial losses.

A 2009 Real Property Assessment Summary for Montgomery County shows over $1,664,494,000 worth of property used for residential purposes (single family homes, apartments, etc.). Taking into account the figures shown in the above chart and considering the total assessment it can be reasoned that any quake causing massive damage to masonry and unbolted frame houses would have a devastating financial effect also.

Loss estimations in terms of vulnerability to damage from earthquakes are virtually impossible to classify based on any type of scale such as the hundred year flood plain that limits the scope of damage to a predictable geographic location, along with a known amount of buildings, critical facilities, and transportation and utilities within that geographic area. The only damage values that are reliable are the cost of replacement or repair of private property and government facilities / infrastructure after the event. The only way to provide a plausible estimate of damage for an event is to use a worse case, total destruction scenario.

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Mitigation Approaches

Both The City of Clarksville and Montgomery County are old, historic entities with many aged structures. Being located in a seismically complacent geographical location, the voluntary inclusion of earthquake resistant features in past construction projects, particularly residential projects, has not been of notable consideration, nor considered economically feasible. The primary mitigation approach for seismic hazards is the adoption of building codes and regulations designed to reduce losses in new and retrofit construction whether they be structures or utility infrastructure. Resources include FEMA, the local Building Codes Department, and structural engineer associations.

Research and Data Collection

Agencies and organizations involved in earthquake hazard research include the Central United States Earthquake Consortium (CUSEC), the US Geologic Survey, the National Institute of Building Sciences (developers of the HAZUS-MH simulation model), state and national geologic agencies, as well as FEMA. Locally, there have been no fault lines or slippages identified in the county and no paleoseismological studies have been conducted by the State Geologist or the US Geological Survey. Regional research has primarily been centered on those areas of the Mississippi Basin where active seismic events frequently occur (New Madrid Seismic Zone).

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USGS Fact Sheet 2009-3071

USGS Fact Sheet 2006-3125

Montgomery County Assessor Office, CAAS Local Assessor System, September 10, 2009

LAND SUBSIDENCE (SINKHOLE) HAZARDS

Montgomery County including the City of Clarksville and the Clarksville-Montgomery County School System lies in an area dominated by karst topography. The term karst describes a distinctive topography that involves the dissolution of the underlying limestone by surface water or ground water. Underground voids occur when the limestone is dissolved by exposure to water movement through cracks and channels in the limestone. When the surface material collapses into the underground void, the resulting depression is referred to as a sinkhole.

The major concentration of sinkholes in Montgomery County lies in the northern half of the county, and includes part of the jurisdictional area within the City of Clarksville, and the Clarksville-Montgomery County School System (Karst Hazard Map, TDEC Groundwater Division 2002 305b report). This is also an area of rapid development, increasing the possibility that sinkhole formations can result in property damage and/or a danger to public health.

Sinkhole rim collapse and secondary throat formations can be dangerous for persons working at a collapse site and economic loss due to structural damage can be significant. Subsidence can result in foundation failures, damage to roadways, parking lots, and buried utilities.

Sinkholes provide a direct connection of area runoff with ground water supplies. Due to the large number of sinkholes in the area, new developments sometimes convert area sinkholes into Class V Injection Wells in order to facilitate drainage of the development. Injection well design area required including a detention area capable of holding the area runoff that would result from a 100 year, 24 hour rain event and these designs must assume that the injection well is completely clogged. In this way, Montgomery County is able to limit damage from flooding due to injection well failure. The injection wells also provide easy access for pollutants to come in contact with the local groundwater system which is already listed as a vulnerable aquifer (Vulnerable Aquifers for Public Water Systems, TDEC Groundwater Division 2002 305b Report).

Probability and Frequency

The probability of new sinkholes occurring is high -- the karst subsoil structure is a predominant land form feature affecting all of Montgomery County, and each jurisdiction within it. There is currently no technology, modeling, or prediction algorithm that can forecast the location, the probability of, nor the frequency of sinkhole collapse.

The probability of sinkholes occurring in areas that have not had notable historic problems increases with change in land use, diversion of runoff water from naturally occurring paths to forced routes, the addition of impermeable surfaces that concentrate runoff, and subsoil vibration caused by heavy construction.

As a result of recent business and industrial growth adjacent to the route of Interstate 24 across the northeast corner of the county, and the desire to locate housing, commercial, and industrial development close to that corridor, the northeastern section of the county continues to experience substantial development. Much of this development is in an area with high sinkhole density. Urban growth persists with residential, commercial, and industrial development continuing at a fast pace.

Exposure and Impact

As the transition from agricultural use to urban use has occurred in the county, more sinkholes have been identified. According to the Natural Resources Conservation Service, the total number of existing sinkholes in the county is unknown. Over 460 sinkholes within the 96 square mile corporate area of the city have been identified since the city was founded in 1785. The distribution of these sink holes covers the entire area within the corporate limits of the City. No area is immune, no area is without its sinkhole network. The majority of these have not been plotted on GIS databases, since many of them were identified prior to the availability of convenient and accurate location and mapping tools. The most recent county soil survey, issued in 1975, indicates soil types prone to flooding due to their properties and the soil profile. Location of these soil types might be used in conjunction with aerial photography and GIS information, plus currently identified sinkholes to project potential sinkhole collapse.

The event of sinkhole collapse presents substantive economic impact, particularly in highly developed areas. Roadbeds and street surfaces can be damaged, structures settle at irregular rates and levels, utilities are disrupted, traffic is detoured, projects can be delayed while remediation measures are completed. It is not common, but occasionally persons can be injured by driving into a new sinkhole, and heavy equipment can be lost or damaged by sliding or rolling into the collapsed area.

For roads/public works/utility departments, sinkhole collapses affecting the infrastructure mean unbudgeted expense as well as the diversion of work crews. For the home or property owner, a sinkhole can mean dislocation and even the eventual loss of the structure.

The extent, using a scale of 1-5 with 1 equals minor depressions developing and 5 equals undermining of roadways and structures. A 5 would be the worst case scenario for all three jurisdictions.

Consequences

In general, sinkhole collapse is primarily an economic issue more than a safety and welfare issue in terms of the event. Of course there are human safety issues related to some sinkhole events – the undiscovered opening in a street, or the collapse of a foundation footing, or even the possible involvement of an equipment operator at the site of a sudden collapse, but these tend to be unusual events. In the main, however, the greatest consequence of this type of hazard is financial. A homeowner who suffers damage to or loss of a residence, a merchant whose customers cannot access his establishment due to a street closing, the municipal utility that loses a primary potable water pipeline all suffer economic loss due to the incident in addition to the inconvenience and the cost of remediation and recovery.
Fortunately, sinkholes tend to form over time, and thus most local sinkhole incidents are not catastrophic. The consequences of sinkhole events may result from improper engineering, conservation, construction, or land use planning practices. Or, they may be caused by failure of aged, brittle materials in an underground utility system. Whatever the cause, the remediation measures require time, financial and human capital resources -- often to the detriment of other important work.

Repairing a caved in street requires detours, diversion of equipment and labor from other projects, expenditure for construction materials, repair and replacement of curbs, signage, and traffic markings. Public safety personnel are required to assure safety of workers, and all this may occur under the pressure of an imminent event such as an approaching storm, or the need to quickly restore utilities for public health and welfare.

Loss Estimation

A sinkhole collapse under a major urban street in 2002 resulted in street and utility repair costs of approximately $235,000. This does not include the losses incurred by area retailers while the street was closed for repairs.
The following article from the local newspaper is an illustration of another sinkhole within the City of Clarksville.

City workers try to plug sinkhole

By REGAN LOYOLA CONNOLLY, and JILL NOELLE CECIL
The Leaf-Chronicle

A large sinkhole on Eighth Street will force motorists to use an alternate route for the next two weeks while city crews repair the road.
The hole, which was discovered June 11 next to Austin Peay State University's Child Learning Center, was only 18 inches long but caused extensive damage to the sewer system, said Jim Durrett, director of Clarksville's Roads, Buildings and Grounds Department.
Crews worked Tuesday to fill in a 40-foot section of road that had to be dug out to repair damaged pipes underground.
A 66-inch concrete storm water pipe cracked from its own weight because of underground erosion. Once the 33-year-old pipe cracked, it began pouring water into the hole, possibly worsening the erosion, said Jack Frazier, civil engineer with the department.
"It's sort of a 'which came first, the chicken or the egg?'" Frazier said. "But we think the hole opened, it cracked the pipe, and then the pipe started to leak."
The sinkhole is roughly 10 feet from a collapse the department repaired in September, Frazier said.
Durrett said it's not uncommon for problems to arise close to where a sinkhole has recently been repaired.
"Unfortunately, the thing about working on sinkholes is that you are going to have to go back and work on it again," he said. "Usually it will rear its head somewhere or another again."
Durrett said the work will cost the city between $125,000 and $150,000 - an expenditure that will clean out the department's coffers just days before the end of the fiscal year.
"That's pretty high," Durrett said of the repair cost. "We feel like we have to do certain things to protect it from happening again, and that costs money."
The director said the city can afford to fix the current problem, but if crews run into complications in the next few days, there may not be money to finish the job.
"If things go like we are anticipating, we think we can handle the problem within our budget," he said.
Sinkholes have caused street closings several times in the last two years. A 25-foot sinkhole opened at College and Fourth streets in March 2002, and three months later, a 12-foot sinkhole split University Avenue.
Crews working on a new sewer line found a void under Commerce Street between Second and Third streets in November 2001. Fill had settled and washed away from a sinkhole originally repaired back in the early 1960s.


Greg Williamson/The Leaf-Chronicle

Clarksville Street Department worker Phillip Davis works dirt in an Eighth Street sinkhole Tuesday. The hole, which was discovered June 11, will keep part of the street closed for the next two weeks while repair work is completed.

Loss estimations in terms of vulnerability to damage from sinkholes are virtually impossible to classify based on any type of scale such as the hundred year flood plain that limits the scope of damage to a predictable geographic location, along with a known amount of buildings, critical facilities, and transportation and utilities within that geographic area. The only damage values that are reliable are the cost of replacement or repair of private property and government facilities / infrastructure after the event. The only way to provide a plausible estimate of damage for an event is to use a worse case, total destruction scenario.

HAZUS MH information summarized in the following paragraphs for buildings, critical facility, and transportation and utility lifeline inventory was used as a basis to define worst case scenario replacement values as our loss estimation.

Building and Lifeline Inventory

Building Inventory

HAZUS estimates that there are 52 thousand buildings in the study region with an aggregate total replacement value of $8,928 million.

Building construction types found in the region are 78% wood frame construction. The remaining percentage is distributed between the other general building types.

Critical Facility Inventory

HAZUS breaks critical facilities into two (2) groups: essential facilities and high potential loss (HPL) facilities. Essential facilities include hospitals, medical clinics, schools, fire stations, police stations, and emergency operations facilities. High potential loss facilities include dams, levees, military installations, nuclear power plants, and hazardous material sites.

For essential facilities, there is 1 hospital in the region with a total bed capacity of 179 beds. There are 42 schools, 2 fire stations, 4 police stations, and 0 emergency operation facilities. With respect to HPL facilities, there are 2 dams identified within the region but neither is classified as ‘high hazard’. The inventory also includes 21 hazardous material sites, 0 military installations, and 0 nuclear power plants.

Hazus MH does not correctly inventory the existing essential facilities. The new hospital has 270 beds, there are 74 hazardous materials sites, fire stations (10 city and 5 county), the law enforcement sites (5 city facilities, 1 county), 1 Emergency Operation Center, nor the existence of the major military installation in our study region. The number of schools is actually 37. None-the-less, the default description has provided the basis for our estimation calculations.

Transportation and Utility Lifeline Inventory

Within HAZUS, the lifeline inventory is divided between transportation and utility lifeline systems. There are seven (7) transportation systems that include highways, railways, light rail, bus, ports, ferry, and airports. There are six (6) utility systems that include potable water, wastewater, natural gas, crude & refined oil, electric power, and communications.

The total value of the lifeline inventory is over $1,934 million. This inventory includes over 263 kilometers of highways, 64 bridges, and 6,363 kilometers of pipes.

Summarizing, this totals $8,928 million in building inventory, $1,934 million in transportation and utility lifeline inventory, for a $10,862 million total inventory value

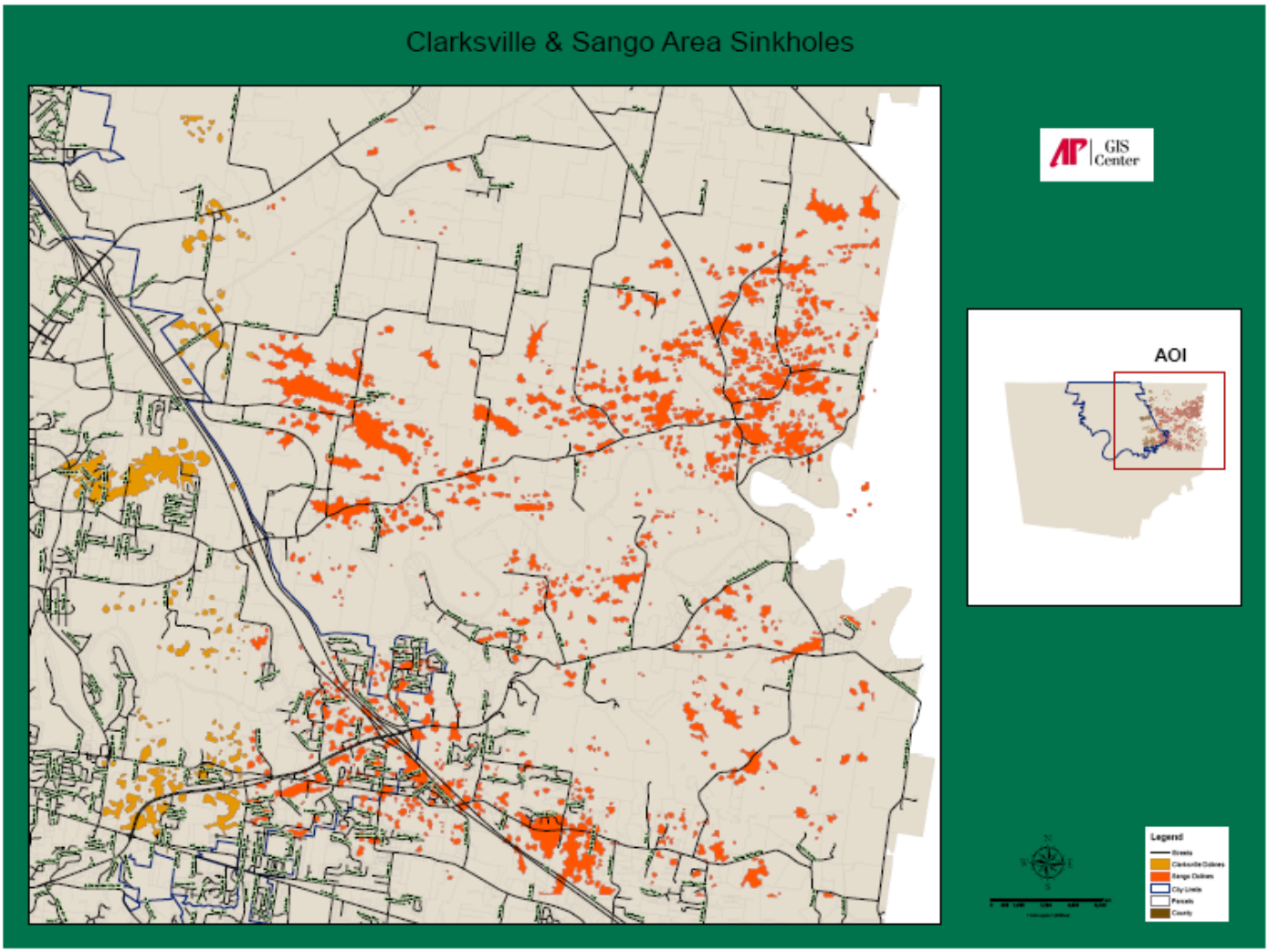
Future buildings, infrastructure, and critical facilities estimated to increase 7% during the next 10 years based upon current industrial, commercial, public infrastructure and residential growth trends suggested by the regional planners and industrial development consultants

Based on the data from HAZUS MH using a 10 year growth period, and an assumption of a 7% increase in replacement cost for future buildings, critical facility, and transportation and utility lifeline inventory at the end of the 10 years.
would increase our current total inventory from $10,862 million to $11,623 million. This is the planning data we have thus integrated into our loss estimation outlook.
Methodology

Current building inventory + transportation and utility lifeline inventory = Current total inventory value

Current total inventory x 7% future growth in inventory after 10 years = $761 million

Current total inventory $10,862 million + future growth in inventory $761 million = future total inventory replacement cost of $11,623 million.



The City of Clarksville is outlined in blue in the AOI box above

Mitigation Approaches

The best mitigation approaches for dealing with sinkholes are aggressive land use planning and informed engineering design. The Clarksville-Montgomery County Regional Planning Commission plays an active role in land use planning and in recommending projects from a zoning/site plan perspective.

The city and county building codes departments, along with the city and county engineers who deal with utilities, storm water, land use issues, streets and roads in several municipal and county departments play a vital role in permitting that considers the implications of sinkhole "management."

Structures to be placed in collapse-prone areas must be adapted to sinkhole terrain. Minimizing disturbance of the land surface during site preparation and construction is important.
The amount of disturbance that can be accommodated involves a number of variables, including type of structure, depth of excavation required, and foundation settlement allowed, fill requirements to bring area up to grade, and the effectiveness of the natural surface drainage.

Development is not permitted over or even at the edge of a known sinkhole, and certainly not over fill placed in a sinkhole to bring development areas to grade. Natural surface drainage paths should be maintained or if modified, should be channeled to areas least likely to generate problems. These requirements must be enforced by permitting and code enforcement activities.

Acquisition and demolition (or property owner sponsored demolition) may be the only alternative for some sinkhole events.

Research and Data Collection

Some research has been conducted specifically about the Clarksville-Montgomery County area. Other significant research has been conducted by scientists in Kentucky, Florida, and Missouri, as well as nations in Europe and Africa that have similar geologic land forms. While most of the literature is dated, the cause and effect elements still apply. What has changed over the past 20-30 years, however, is the evolution of opportunity for civil engineers to specialize in drainage-related disciplines, advances in land use planning, and the experience of working with and living with karst subsidence problems. Today's method of dealing with a collapse is to manage the problem, not drive around it.

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HAZARDOUS MATERIALS

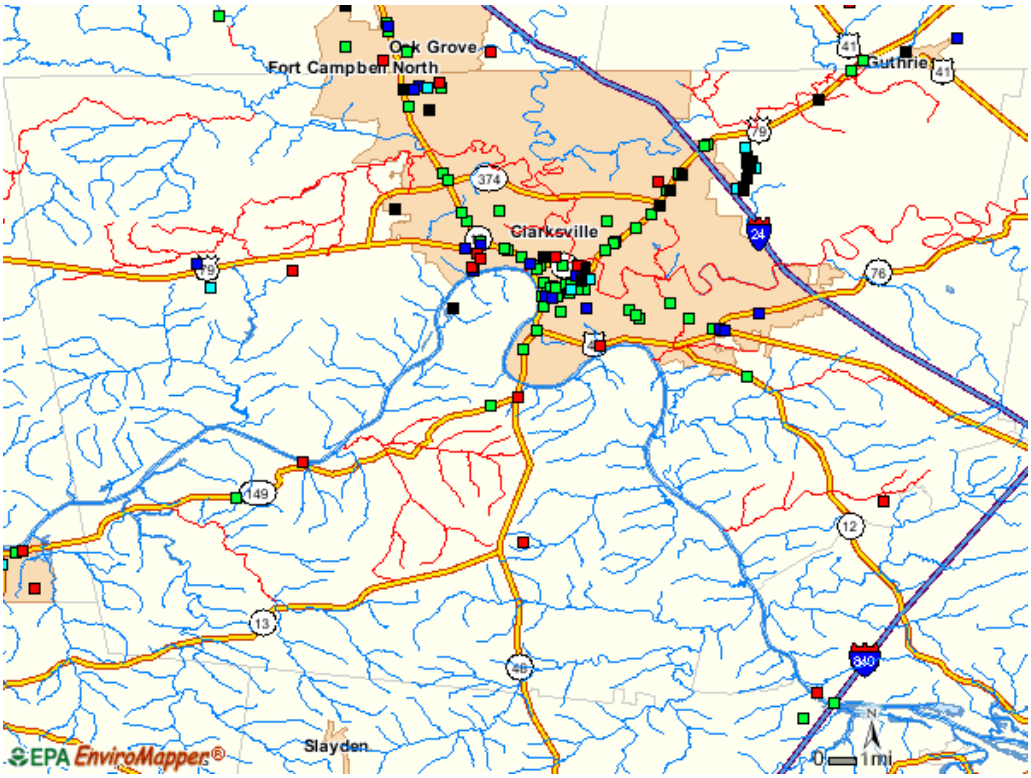
Hazardous materials are found in every community. They range from the gasoline at the local convenience store to the ammonia used in agricultural operations. They are found everywhere from our homes to the largest local industry and even the local fire department. Hazardous materials are part of our everyday life and they are often taken for granted.

Probability and Frequency

A September 28, 2009 report from U.S. Department of Transportation Hazardous Materials Information System recorded 3,659 HAZMAT events from 1999 to 2008. Approximately 86% are highway events, the remaining are primarily railroad events, and less than 1% by air. These events may involve collisions (or derailments), spills, leakage from container vehicles, or violation(s) of regulations.

Best estimates from TEMA are that approximately 250,000 shipments of hazardous materials cross Tennessee annually. Major incidents are not common, but do occur at the rate of about 50 per year for the state. Fixed facility events are even rarer, with incidents that require evacuation occurring at the rate of six per year in Tennessee. The Montgomery County Emergency Management Agency responds to an average of 27 hazardous materials calls per year, most involving a small amount of spillage. There are 74 hazardous materials sites throughout Montgomery County.

EPA ENVIROMAPPER - MONTGOMERY COUNTY, TENNESSEE



EPA Enviromapper, 11/14/2008

Transportation hazardous materials incidents are likely, as are events at the many fixed facilities in Montgomery County (Including The City of Clarksville, and The Clarksville-Montgomery County School System).Prediction of the frequency and probability is virtually impossible due to the number of uncontrollable variables.

Robert Smith/The Leaf-Chronicle

Workers with SWS Environmental First Response of Paducah, Ky,, works to clean up a fuel spill Tuesday afternoon in the Cumberland River behind Wendy's . The fuel was spilled from the Delta Queen, which was docked at McGregor Park, early Monday morning.

Exposure and Impact

An interstate, various state and local highways, two railroads, and two pipelines cross Montgomery County (Including The City of Clarksville, and The Clarksville-Montgomery County School System). Four barge terminals, including a large amount of barge traffic, operate on the Cumberland River in Montgomery County. All transport hazardous materials whether it is just passing through or being delivered to or shipped from a local industry.

With nearly 3,000 acres of industrial sites, the potential for additional HAZMAT events exists. According to the Environmental Protection Agency, over 25,783,169 pounds of toxic releases/disposal has been generated within Montgomery County as of 2007.

An example of the types and amounts of hazardous materials which traverse the County(Including The City of Clarksville, and The Clarksville-Montgomery County School System) on a daily basis are those that are shipped from a zinc refining operation located on the Cumberland River. This facility has both an onsite barge offloading point and a railroad line which crosses the property. On a daily basis this rail line transports substantial quantities of sulfuric acid (approximately 400 tons) across the Cumberland and Red Rivers, through the downtown Clarksville area (the seat of City and County government), and then continues through the County. Each trip holds a significant, potential risk to not only the residents, but to the environment, if a mishap were to occur.

Due to the large agricultural base in the County a large amount of pesticides, herbicides and fertilizers (all with toxic potential) are transported throughout the county on a regular basis. These products are then stored at commercial agricultural supply houses as well as in tanks and/or warehouses located on farms throughout the County. Add to this the numerous service stations receiving and dispensing fuel and the number of water treatment plants within the county where large amounts of chlorine are stored, and the potential exposure is substantive.

The extent of damage using the low, medium, and high scale, with “low” equals a small fuel spill at a service station that closed the business for a few hours while the cleanup operation was completed. An evacuation of residents and businesses downwind from the release of a hazardous chemical at a bulk container for an extended period of time would equals “high” on the scale. High would be a worst case scenario type of event.

Montgomery County has had a relatively low rate of exposure of the general population to hazardous materials to date. Clarksville Fire Rescue and the County Fire Service, in addition to plant personnel, and the Department of Defense at Ft. Campbell provide trained personnel and equipment for hazmat event response to reduce significant incident impact in both the community and the region.

Additionally, law enforcement agencies are continuously contending through aggressive enforcement activities with the growth and expansion of meth labs, both mobile and fixed, in an attempt to reduce potential community exposure to the dangers of the manufacturing process.

Consequences

The consequences of a HAZMAT event can be as varied as the nature of the hazardous material involved. In the worst case scenario, a HAZMAT incident could lead to the loss of life, or the long-term disability of personnel exposed to the substance.

Loss Estimation

A “typical” event for a non-plant site with built-in containment facilities, which involves a Level A entry team, a decontamination team, engine and rescue companies, EMS units, police/sheriff patrols for traffic and security, plus expended supplies and equipment can easily generate $20,000-$25,000 in costs for a low to moderate level event. Not measurable for such a “typical” event is the loss of business revenue, the down-time, the inconvenience time for re-routed travelers, or the medical expenses of one or more victims. Loss estimation for HAZMAT events in the Montgomery County (Including the City of Clarksville, and The Clarksville-Montgomery County School System area does not include the potential loss of life. Loss estimation for illicit drug events such as containment, dismantling and destruction of a meth lab, may approach $35,000, depending on the site, the quantity, the nature of the operation, and the agencies involved. Industrial facilities are required by 40 CFR Part 355 to maintain worst case scenario plans in the event of a catastrophic release of chemicals. There is a potential for having to evacuate homes and businesses due to hazardous materials releases, but the potential for destruction of Building lifeline inventories is remote.

Loss estimations in terms of vulnerability to damage from hazardous materials are difficult to predict because there are a multitude of potential scenarios where buildings would need to be decontaminated or could be destroyed or rendered unusable due to a hazardous materials release, and hundreds plume maps could be developed for these scenarios. There is also the possibility of terrorist strikes at the major military post that borders the three jurisdictions. A first strike scenario to incapacitate this major military post although slight is still a potential.
The only way to provide a plausible estimate of damage for an event is to use a worse case, total destruction scenario that would potentially occur in the event of such an event.

HAZUS MH information summarized in the following paragraphs for buildings, critical facility, and transportation and utility lifeline inventory was used as a basis to define worst case scenario replacement values as our loss estimation.

Mitigation Approaches

Avoidance of HAZMAT events can come from two types of efforts: physical and sociological. Physical adjustments to avoid HAZMAT events precipitated by the impact of natural hazards include design and construction to withstand prevalent natural hazards, identification, and avoidance of potential event locations, and natural hazard prediction efforts.

Social adjustments to avoid impacts associated with natural hazards include land use restrictions, activity by the Local Emergency Planning Committee, initiation of public awareness programs in areas where hazardous materials are present, design of emergency preparedness and evacuation plans to protect life and property, creating emergency notification systems (including the use of the early warning siren system within the city), and spreading economic loss through a larger segment of the population through insurance and taxation efforts.

Research and Data Collection

FEMA, DOT, EPA, and numerous other agencies have emplaced rigorous collection and reporting programs. Information for this hazard was collected from publications and documents generated by these and other affiliated agencies, and represents the better summative data available. Agencies such as those listed conduct continuing sponsored research to continue to add to the knowledge base.

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IV. CAPABILITY ASSESSMENT

Incorporation of Mitigation into Existing Plans and Policies

The mitigation strategies in the original Plan were incorporated into other existing mitigation planning mechanisms, such as policies, procedures, or other plans through the corresponding legislative bodies that are part of the multi-jurisdictional plan. The multi-jurisdictional hazard mitigation plan will continue to be used as the primary mitigation guidance document and incorporated into future policies, procedures, or other plans when feasible. The following examples below are provided as illustrations of current incorporations of the hazard mitigation plan.

EXAMPLE: The Montgomery County Highway Department incorporated the strategy to build satellite salt storage facilities throughout the county to speed response times, and lower transportation cost during snow and ice events. Two of the satellite salt storage facilities have been built to date and another is proposed in the next budget year.

EXAMPLE 2: The city and county building and codes departments as part of their mitigation planning are considering upgrading from the 2003 International Building Codes to newer version within the next year to make sure that the codes are consistent with newer technologies and safety standards within the construction industry. A Resolution to upgrade existing building codes would first have to be passed by the City Council or County Commission before the change could occur.

EXAMPLE 3: The Montgomery County Storm Water department has developed a data base of known sinkholes, and has implemented a public education program as part of their efforts to mitigate the use sinkholes as trash and debris dumping sites, and limit the use of sinkholes as storm water disposal structures. Specific policies and guidance have been developed for the public and developers will be made accessible in the future via the department website.

The three examples above are a few, but not all of the cases where the hazard mitigation plan was incorporated into other policies, procedures, or plans to demonstrate the progress in local mitigation efforts.

Existing Mitigation Policies

Existing policies, plans, resolutions, and programs were reviewed by the Hazard Mitigation Team for applicability to Hazard Mitigation. Those that were deemed related are listed below. All information from these sources that is applicable to Hazard Mitigation has been included in this Plan.

- **National Flood Insurance Program (NFIP):** Montgomery County and the City of Clarksville are participants in the National Flood Insurance Program which provides flood insurance to homes and a business located in floodplains at a reasonable cost, and encourages the location of new development away from the floodplain. The program is based upon mapping areas of flood risk, and requiring local implementation to reduce that risk, primarily through guidance of new development in floodplains.

- The City and County Building & Codes offices will not perform final inspections on structures within the floodplain without an elevation certificate signed by an engineer or surveyor stating that the structure was built to NFIP standards. All other applicable information is included in this Plan.

- **Emergency Management Agency:** The Montgomery County Emergency Management Agency was created by Montgomery County for the purpose of developing plans and procedures that would provide the most effective and efficient coordination of resources available in the mitigation of, planning and preparedness for, response to and recover from emergencies and disasters. The agency is also responsible for helping prepare the citizens of Montgomery County to deal with emergencies and their consequences.

- **Montgomery County Emergency Operations Plan:** This plan establishes the framework for the development of a comprehensive emergency management program within and for Montgomery County and its various political subdivisions. The emergency management program's purpose is to mitigate the potential effects of the various hazards that might impact the county, to prepare for the implementation of measures which will preserve life and minimize damage, to respond effectively to the needs of the citizens and local jurisdictions during emergencies, and to provide a recovery system to return the county and its communities to a normal status as soon as possible after such emergencies. This plan defines the roles and responsibilities associated with the mitigation, preparedness, response, and recovery efforts directed at natural disasters, technological accidents, enemy attacks, and other major events that might impact Montgomery County.

- **Clarksville Fire Rescue Hazardous Materials Team:** The Clarksville Fire Rescue Hazardous Materials Team was established with funds from the City of Clarksville to provide response for hazardous materials situations for the City of Clarksville and neighboring entities if requested.

- **Montgomery County Fire Service Hazardous Materials Team:** The Montgomery County Hazardous Materials Team was established with funds from Montgomery County to provide response for hazardous materials situations for Montgomery County and neighboring entities if requested.

- **Warning System:** Warning sirens have been installed in the City of Clarksville to alert the citizens when natural or manmade emergencies occur that require rapid dissemination to the populace (tornado warning, hazardous material release, etc.). The warning system is tested on a regular basis to ensure that each siren is working properly.

- **Geographic Information Systems (GIS):** Montgomery County began GIS in 1997, when the county learned it would be one of the first in the state to participate in the Tennessee Base Mapping Program. As a result of the project, Montgomery County has high-quality GIS data and is well ahead of most counties in Tennessee. The GIS Center is responsible for coordinating GIS data sharing and creating base map layers for use by these agencies and the public. The GIS Center is located at Austin Peay State University in Clarksville and is manned by employees of Austin Peay State University, and some student workers.

- **American Red Cross:** Clarksville and Montgomery County are served by the Mid-South Chapter of the American Red Cross, which provides emergency preparedness and disaster awareness programs relating to floods, severe storms, tornadoes, earthquakes and other disasters that might affect Clarksville and Montgomery County.

- **The National Weather Service:** The National Weather Service (NWS) provides weather, hydrologic, and climate forecasts and warnings for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community.

- **NOAA Alert System**: NOAA, the voice of the National Weather Service, provides up to date weather information, 24 hours a day, every day of the year. Watches, Warnings, and weather statements from the NWS are given out over the NOAA Alert System. It is also a major part of the Emergency Alert System that speeds critical information through commercial broadcast outlets. A tower was constructed in Montgomery County to increase the coverage of the NOAA alert system.

- **The Central United States Earthquake Consortium (CUSEC):** CUSEC is an organization of 7 states (Tennessee, Arkansas, Illinois, Indiana, Kentucky, Missouri, and Mississippi) dedicated to earthquake awareness, hazard reduction, and research.

  CUSEC's goal is to ensure that planners, developers, building officials, lenders, insurance representatives and other key players understand the potential consequences of earthquakes, and begin to incorporate mitigation into the daily decisions that are made on sitting, design, and construction of buildings and lifelines.

- **Department of Agriculture (USDA):**

  Forest Service – Their primary responsibility lies in prevention and suppression of wild land fires on all land outside of municipalities. All activities are aimed at reducing the number of fires and the acres burned through fire prevention, fire suppression, training, and working with rural fire departments.

  Soil Conservation Service – The SCS can provide technical assistance in the conservation, development, and productive use of soil and water resources. Their activities include:

  (1) Watershed Protection and Flood Prevention

  The SCS provides technical and financial assistance to local organizations to plan and install works of improvement for watershed protection, flood prevention, agricultural water management, and other approved purposes. (Watershed Protection and Flood Protection Act, Public Law 83-566)

(2) Floodplain Management Studies

Assistance for cooperative floodplain management studies is provided to local communities or units of government to provide information and large-scale mapping needed in alleviating potential flood dangers. Funding is 80/20. (Public Law 83-566, Section 6)

(3) Emergency Watershed Protection

Emergency watershed protection assistance is provided to reduce hazards to life and property in watersheds damaged by severe natural events. (Section 403-405, Agricultural Credit Act of 1978; Section 216, Flood Control Act of 1950, Public Law 81-576)

(4) Conservation Technical Assistance

In addition to the specific program activities, the SCS can provide technical assistance to land users in the planning and application of conservation treatments to control erosion and reduce upstream flooding along with other purposes such as sediment reduction. (Public Law 74-46)

- **Clarksville-Montgomery County Regional Planning Commission:** The C-MC Regional Planning Commission consists of a 9 member board appointed by the Montgomery County Commission and the Clarksville City Council. The commission promotes orderly growth and development in The City of Clarksville and Montgomery County by maintaining a comprehensive planning program which minimizes land use conflicts, coordinates the provision of public service, and optimizes the quality of life for all county residents.

- **Montgomery County Building & Codes:** A Resolution which regulates the location, height, bulk, number of stories and size of buildings and other structures, the percentage of the lot which may be occupied, the sizes of yards, courts and other open spaces, the density of population, and the use of buildings, structures and land for trade, industry, residence, recreation, agriculture, forestry, soil and water conservation, public activities and other purposes including areas subject to flooding in the portion of Montgomery County outside the limits of the City of Clarksville.

- **City of Clarksville Building & Codes:** An Ordinance which regulates the location, height, bulk, number of stories and size of buildings and other structures, the percentage of the lot which may be occupied, the sizes of yards, courts and other open spaces, the density of population, and the use of buildings, structures and land for trade, industry, residence, recreation, agriculture, forestry, soil and water conservation, public activities and other purposes including areas subject to flooding within the limits of the City of Clarksville.

- **U.S. Army Corps of Engineers (USACE):** The Civil Works Program of the Corps encompasses a broad range of resource development activities for navigation, flood control, major drainage, shore and beach restoration and protection, flood protection, related hydroelectric power development, water supply, water quality control, fish and wildlife conservation and enhancement, outdoor recreation, and development, including consideration of environmental impacts of proposals and alternatives.

- **Tennessee Department of Economic and Community Development:** The Tennessee Floodplain Management Coordinator for the National Flood Insurance Program is housed in the TDECD. The Coordinator assists communities with preparation, adoption, and administration of floodplain management ordinances or resolutions and integrates floodplain management into comprehensive community planning documents and processes. (Executive Orders, TCA Title 13)

- **Tennessee Department of Commerce and Insurance (TDCI), State Fire Marshal's Office:** The State Fire Marshal's Office investigates and prosecutes arson; enforces fire and building codes (including seismic codes); regulates users of explosives; regulates LP gas facilities; inspects electrical installations; coordinates Public Fire Education campaigns through the dissemination of educational videos and literature and produces and designs "Duck and Cover" and Fire Safety videos for schools and civic groups.

- **Tennessee Department of Transportation:** Primary mitigation responsibility involves strengthening and hardening of roads and bridges as a result of repair or replacement. TDOT maintains an inventory of barricades and high water signs for use in the event of roadway flooding; personnel monitor streams as flood warnings dictate. TDOT maintains personnel and equipment to clear roadways in the event of blockage from storms, tornadoes, winter storms, and landslides. Engineers from the city, county, state, and railroads inspect the bridges in the three jurisdictions.

- **EPA Clean Water Act Phase II Regulations** – Both the City and County must meet these requirements. These regulations dictate that a program must be put in place for the review of drainage and construction plans in regards to quality and quantity. Both the City and County passed Storm Water Management Ordinances to address these issues. Plans for projects disturbing one acre or more are reviewed for completeness and accuracy, after approval these plans are used in inspections of the project to ensure that the approved plans are being followed; the project is then signed off by the inspector for release for further development. The project must then be released by a final inspection before any lots can be sold or the land can be occupied.

** It should be noted that the Montgomery County Highway Department reviews plans for items within the right-of-way as these are located within their jurisdiction. Montgomery County Building & Codes reviews all other structures and is responsible for the overall compliance of Montgomery County with the above mentioned regulations.

- **Monthly Site Plan and Plat Reviews** – Monthly meetings are held by the Regional Planning Commission at which water, electric, sewer, natural gas, street, and drainage officials from both the City and County are present. All plans and property plats submitted for that month are then reviewed in the presence of the owner or their agent and must be signed off by each of the entities before the plan can go any further. This allows City and County officials and the owner to each be aware of the other's concerns.

- **Project approval process** – After the site review meeting all adjoining property owners are contacted to make them aware of the project and to advise them the date of the next RPC meeting. The Regional Planning Commission then meets and will either approve or disapprove the project after taking into consideration the concerns that are brought up in the site review and also after a public hearing at which members of the general public can speak for or against the project. No matter the outcome of the RPC hearing the project can then go in front of the County Commission or City Council (depending on location of project) for another public hearing and final approval or disapproval.

- **National Flood Insurance Program Participation** – Clarksville and Montgomery County have been part of the National Flood Insurance Program since 1984.

- **Building Code Compliance** – Through the adoption and enforcement of various building related codes both the City and County Building Codes Departments work to ensure that all structures are built to wind, snow, and earthquake design loads for the area. Both Departments employ several certified building Inspectors. As stated earlier, these Departments also enforce flood plain regulations.

Risk Exacerbating Policies

Montgomery County is in the process of developing a karst policy. This policy will encourage isolation of sinkholes, and discourage the use of injection wells to drain area runoff. This will tend to limit the possibility of groundwater contamination to existing injection wells that can be more easily monitored. Maintenance policy for sinkholes and injection wells area also being developed that will help increase the stability of these structures.

Currently, construction in floodplains may occur if an elevation certificate showing that the structure is at least one foot above 100 yr flood elevation is provided during or after construction.

Potential Mitigation Policy under Existing Authority

Storm Water Regulations: The City and County both were required under Phase II of the Environmental Protection Agency Clean Water Act to create and adopt guidelines related to the quality and quantity of storm water discharge from their respective jurisdiction. These regulations assign maintenance responsibility for storm water structures to the individual landowner. While the County has jurisdiction to go off the right-of-way for drainage structure maintenance, financial constraints limit this option.

The Clean Water Act requires both the City and the County to map the storm water systems, and both jurisdictions have ongoing mapping programs to fulfill this requirement

V. GOALS, OBJECTIVES, AND STRATEGIES

Recap on Hazards

Flood Hazards: The jurisdictions can expect three or four flood/flash flood events annually. In 100 year flood zones, an estimated 2,035 residential and 253 non-residential parcels are at risk while only 341 NFIP policies are in effect in Montgomery County as of June 2009. Non-riverine, run-off flooding due to blocked drainage, improper building and development, etc. appears to be the biggest flooding problem. With continued development in all jurisdictions generating greater areas of impermeable surfaces, the use of sinkholes for drainage and the problems related to their use, the frequency and extent of loss due to flooding, riverine or otherwise may be expected to increase. Inundation flooding from failure of upstream flood control dams is a low probability event, but should it occur, worst case scenarios indicate catastrophic results.

Wind, Tornado and Winter Storm Hazards: Over a number of years, climatology records indicate a frequency of severe wind/thunderstorms can be expected about 8 times annually, primarily during late spring.
Averaging tornadic event frequency for over 59 years would lead us to expect such events about once each 3.1 years. However, more recent data moves that frequency closer to one event per year, due either to a shift in the jet stream or better recognition and reporting, or both. Fifty years of reporting data lead us to expect one major winter storm annually. Of this set of events, our greatest vulnerability is to wind-related hazards.

Earthquake Hazards: The probability of an earthquake event in Clarksville-Montgomery County is relatively low due to the absence of active subsurface faults and the infrequency of large magnitude quakes in upper Middle Tennessee. The county does, however, lie in a high seismic risk area due to its proximity to the New Madrid event area. The State Geologist classifies Montgomery County as being in a Moderate Risk status. Data are limited, but it is safe to hypothesize that few property owners carry risk insurance for earthquake event losses.

Subsidence (Sinkhole) Hazards: Clarksville and Montgomery County sit within the State of Tennessee's most vulnerable areas for sinkhole events. The probability of new sinkhole development is significant as land use changes and as rapid urban development occurs forcing rainfall and snow melt to seek alternate routes of entry into the karst underlayment. The City of Clarksville already manages some 460 sinkholes within its 96 square mile corporate limits. With structural density increasing and expansion into more sinkhole prone areas, vulnerability exposure is increasing.

Hazardous Materials: Hazardous materials are a fact of life in the Clarksville-Montgomery County area. As an agricultural area and at the center of the fastest growing, and one of the largest industrial centers in the Southeastern United States, the potential exists for HAZMAT incidents. Couple these variables with the area being a focal point for land, air and water transportation and the opportunities are magnified.

GOALS

The goals of local hazard mitigation fit the public welfare mission of all jurisdictions, and are intended to include existing and future new buildings and infrastructure. They include the following to the extent possible within the constraints for available resources and jurisdictional capabilities:

- Reduction of future damages to current buildings and infrastructure due to natural hazards
- Reduction of future damages including new buildings and infrastructure due to natural hazards
- Reduction of future damages due to man-made hazards
- Adoption of hazard analysis and mitigation in land use and development planning and approval
- Promotion of public awareness to natural hazards and their effects
- Promotion of public awareness to man-made hazards and their effects
- Promotion of individual activities which can lessen exposure to these hazards
- Provide the residents and students of all jurisdictions a safe environment through minimum exposure to the risks of natural hazards
- Provide safe areas as part of all new construction for government offices, schools, and outdoor training areas.

OBJECTIVES

Hazard mitigation objectives outlined with this plan have been identified to aid in achievement of the goals established by the officials of all jurisdictions.

- To create an ongoing community-wide public information program targeting natural hazard preparedness
- To continue as members in good standing with the National Flood Insurance Program through enforcement of local codes and regulations
- To identify, annually evaluate, and implement a hazard mitigation planning process for the purpose of eliminating risks associated with natural and manmade hazards
- To provide for maintenance and construction of the community's storm water drainage system
- To require new structures in the flood plain be elevated above the 100 year flood level
- To retrofit existing utility structures to ensure continued operation can occur during extended power outages and flooding
- To enforce standards and codes related to building and land use, and work to adopt the latest editions of said codes.

STRATEGIES

These strategies have been developed by the Hazard Mitigation Team and have been prioritized according to need and possible funding sources, Benefit Cost Analysis have not been performed at this time.
These strategies should not be construed as being the final list of strategies as problems will arise which require new strategies and new projects.

All future strategies and projects will also come through the Hazard Mitigation Team before insertion into the Multi-Jurisdictional Hazard Mitigation Plan. If the strategy encompasses all jurisdictions, the lead agency for each entity is listed for the strategy.

FEMA Benefit-Cost-Analysis software will be used in the preparation of grant applications for specific projects. The Benefit-Cost-Analysis for these projects may change the prioritization schedule for the listed projects and will exclude strategies and projects from FEMA Hazard Mitigation Grant funding if they are found to not be cost-effective. Detailed budget estimates as well as the above Benefit Cost Analysis will be included with applications to request funding for specific projects. All projects will be reviewed to maintain compliance with NFIP standards as part of project development.

The mitigation strategies from the original plan had status checks performed on them during the plan maintenance and update process. Some of the strategies such as the one involving updating the flood maps for Montgomery County were completed. Others fall into a category that is designated as implemented and ongoing which indicates that the process is continuous and will likely not reach a “completed” status during the next plan cycle. A few of the strategies after thorough review and analysis by the hazard mitigation team were removed due to being not feasible for various reasons. The original strategies are bench marks for progress since the approval of the original plan.
A complete listing of the original strategies and their status is listed in Appendix 9 of this plan.

The strategies listed during the update process are new, along with the implemented and ongoing strategies, which will be used as bench marks for progress in the next plan cycle.

FLOODING

Objectives and Strategies

Objective: 1

Problem Statement:

Drainage structures are not being properly maintained.

These structures are usually left up to the property owner to maintain but they lack the training to do this. Improper maintenance contributes to flooding problems and also health issues related to stagnant water and the dangers of having a large body of water in a residential development. There is also the problem of property changing hands and having to educate new owners.

Mitigation strategy:

Continue to educate the owners of property where drainage structures are located on care for the structures such as removing trash and debris. Educate property owners about the National Flood Insurance Plan (NFIP). Post information regarding drainage structure care on websites for easy public access. Continue to make use of public outreach programs to teach mitigation actions to stop blockages before they occur.

Lead Agency for each Jurisdiction:

Montgomery County Building and Codes Department Storm Water Division.

City of Clarksville Street Department would implement the policy within the city limits.

Implementation Schedule:

Implemented and ongoing, based on benefit-cost analysis review.

Source of Funding:

City/County General Funds, EPA 319 Funds

Estimated Cost: $10,000 per year

Objective: 2

Problem Statement:

Use of sinkholes to drain developed areas may be overloading the underground drainage system thereby causing flooding and land subsidence

Mitigation Strategy:

Continue to monitor known sinkholes and add new sinkholes as they are encountered. Perform an annual sinkhole map update from the information provided by all jurisdictional agencies that have new information.

Lead Agency for each Jurisdiction:

Montgomery County Building and Codes – Storm Water Division

City of Clarksville Street Department

Implementation schedule:

Implemented and ongoing, based on benefit-cost analysis review

Source of funding:

City/County General Funds, and EPA 319 funds

Estimated Cost: $50,000 per year

Objective: 3

Problem Statement:

Multiple businesses close to the downtown Clarksville area suffer flooding problems during periods of heavy rainfall.

Mitigation strategy:

Schedule an annual drainage study of the areas that are prone to flood and make improvements as needed based on a new prioritized list, and budget restrictions.

Lead Agency:

City of Clarksville Street Department

Implementation schedule:

Implemented and ongoing, based on benefit-cost analysis review.

Source of funding:

Community Development Block Grants, City/County General Funds

Estimated Cost: In excess of $ 30,000

Objective: 4

Problem Statement:

Wastewater pumping stations located in low-lying areas are susceptible to flooding events that exceed the 100 year flood event criteria. The pump stations are designed not to “float” and release waste water during a 100 year flood event, but do suffer from flooding that exceeds the 100 year standard occasionally.

Mitigation strategy:

Continue to build pump stations that are designed to the 100 flood event standard while evaluating new technologies or methods that could prevent future occurrences of flooding.

Lead Agency:

Clarksville Gas and Water Department

Implementation schedule:

Conduct a bi-annual benefit-cost analysis review of the pump stations that are susceptible to flooding, to determine if new procedures or technology can be used as an alternative strategy.

Source of funding:

FEMA Hazard Mitigation Grant funds, Community Development Block Grants, City/County General Funds

Estimated Cost: $100,000 - $500,000

Objective: 5

Problem Statement:

Structures in the floodplain must be built to NFIP requirements.

Mitigation strategy:

Continue to enforce NFIP requirements when structures are built in the floodplain. All projects will be reviewed and prioritized based on a benefit-cost analysis study to maximize benefits.

Lead Agency for each Jurisdiction:

Montgomery County Building and Codes

City of Clarksville Building and Codes

Implementation schedule:

Continued upon date of Plan approval

Source of funding: City/County General Fund

Estimated Cost: $10,000 per year

SEVERE STORMS
TORNADO/HIGH WIND HAZARDS/ WINTER STORM

Objectives and Strategies

Objective: 1

Problem Statement:

Structures need to be built to meet applicable building codes including wind load requirements, strapping, etc.

Mitigation strategy:

Continue to enforce building codes to ensure structures are built to the requirements of the local adopted building code.

Lead Agency for each Jurisdiction:

Montgomery County Building and Codes

City of Clarksville Building and Codes

Implementation schedule:

Implemented and ongoing

Source of funding:

FEMA Hazard Mitigation Grant funds, City/County General funds

Estimated Cost: $10,000 per year

Objective: 2

Problem Statement:

Dead, overhanging, and otherwise dangerous trees located in the right-of-way fall into the roadways during severe weather causing road closures and driving hazards.

Mitigation strategy:

Continue programs to trim and/or remove trees/limbs which appear to be as described above.

Lead Agency for each Jurisdiction:

Montgomery County Highway Department

City of Clarksville Street Department

Clarksville Department of Electricity

Cumberland Electric Membership Corporation

Implementation schedule:

Implemented and ongoing

Source of funding:

City/County General funds, Maintenance funds for electric companies

Estimated Cost: $50,000 - $100,000 per year

Objective: 3

Problem Statement:

Some of the older school complexes in the Clarksville-Montgomery County School System need to be retrofitted with storm safe rooms that are built to current technical standards.

Mitigation strategy:

Retrofit the older schools with safe rooms within quick access to all students and staff.

Alternatives:

1. Construct storm shelters that would be connected to the existing buildings.

2. Require new school construction to provide for safe areas in the design and construction phases.

Lead Agency:

Clarksville-Montgomery County School System

Implementation schedule:

Develop and prioritize a retrofitting schedule. Annually review the schedule and conduct construction based upon budget priorities.

Source of funding:

FEMA Hazard Mitigation Grant funds, FEMA Pre-Disaster Mitigation Program Funds, Community Development Block Grant funds, Housing and Urban Development funds

Estimated Cost: In excess of $5,000,000 to retrofit all of the current schools

EARTHQUAKE

Objectives and Strategies

Objective: 1

Problem Statement:

Structures need to be built to meet applicable building codes that relate to seismic activity (i.e., anchor bolt placement, footing requirements)

Mitigation strategy:

Continue to enforce building codes to ensure structures are built to the requirements of the local adopted building code.

Lead Agency for each Jurisdiction:

Montgomery County Building and Codes

City of Clarksville Building and Codes

Clarksville-Montgomery County School System

Implementation Schedule:

Implemented and ongoing

Source of funding:

FEMA Hazard Mitigation Grant funds, City/County General Funds

Estimated Cost: $10,000 per year

LAND SUBSIDENCE (SINKHOLES)

Objectives and Strategies

Objective: 1

Problem statement:

Use of sinkholes to drain developed areas may be overloading the underground drainage system thereby causing flooding and land subsidence

Mitigation Strategy:

Continue to monitor known sinkholes and add new sinkholes as they are encountered. Perform an annual sinkhole map update from the information provided by all jurisdictional agencies that have new information. Continue to enforce land use through codes permitting actions.

Lead agency for each Jurisdiction:

Montgomery County Building and Codes – Storm Water Division

City of Clarksville Building and Codes

Clarksville-Montgomery County School System

Implementation schedule:

Implemented and ongoing

Source of funding:

Hazard Mitigation Grant Funds, City/County General Funds, and EPA 319 funds

Estimated Cost: $10,000 per year

HAZARDOUS MATERIALS

Objectives and Strategies

Objective: 1

Problem Statement:

Structures need to be built to meet applicable building codes, and other federal and state requirements related to hazardous material storage and use.

Mitigation strategy:

Continue to enforce building codes to ensure structures are built to the requirements of the local adopted building code. All non-bulk chemicals in the structures will be stored in accordance with 29 CFR. Each agency will be responsible for maintaining storage in accordance with 29 CFR standards.

Lead Agency for each Jurisdiction:

Montgomery County Building and Codes / and Risk Management

City of Clarksville Building and Codes / and Risk Management

Clarksville-Montgomery County School System Risk Management

Implementation schedule:

Implemented and ongoing

Source of funding: City/County General funds, FEMA Hazard Mitigation Grant funds

Estimated Cost: $10,000 per year

Objective: 2

Problem Statement:

The need to maintain and update training and equipment for Clarksville Fire Rescue and Montgomery County Fire Service Hazardous Materials Teams and recruit and prepare new members.

Mitigation strategy:

Continue with the current programs that are in place to maintain the training and equipping of hazardous materials technicians from all jurisdictions.

Lead Agency for each Jurisdiction:

Montgomery County Emergency Management Agency

City of Clarksville Fire/Rescue

Implementation schedule:

Implemented and ongoing

Source of Funding:

City/County General Funds, Assistance to firefighter grants

Estimated Cost: $50,000 per year

Objective: 3

Problem Statement:

There is a need for more public safety personnel to be trained to the Hazardous Materials Awareness Level to assist with initial response to hazardous material incidents.

Mitigation strategy:

Continue to train all emergency services public service personnel to the Awareness Level to aid in their response to hazardous incidents.

Alternatives:

Rely exclusively on Clarksville Fire/Rescue and Montgomery County Fire Service personnel to perform hazardous material operations. The problem with this alternative is that the emergency medical service and law enforcement are often the first units to the scene. Training them to awareness level will help ensure their own safety as well as the public's safety by knowing how to respond and secure a hazardous materials incident site.

Lead Agency for each Jurisdiction:

Montgomery County Emergency Management Agency

City of Clarksville Fire Rescue

Implementation schedule:

Implemented and ongoing

Source of Funding:

City/County General Funds, FEMA Hazard Mitigation Grant Funds

Estimated Cost: $20,000 per year

Objective: 4

Problem Statement:

There is a rising need to have trained hazardous materials technicians from the city and county fire departments that can operate boats safely and properly deploy spill response equipment. Due to the continued growth in manufacturing and commodities distribution in and around Montgomery County, the transportation of bulk materials such as fuel on the Cumberland River will be increasing. The increase in barge traffic containing hazardous materials will add to the potential for a hazardous material release into the river. The Montgomery County Rescue Squad Members provide boat operations within Montgomery County, but most of the members are not hazardous materials technicians. The Montgomery County Rescue Squad is a volunteer organization which is centrally located within the City of Clarksville at the mouth of the Red River and the Cumberland River. Having the hazardous materials technicians from the city and county fire departments trained as boat operators could potentially allow for a faster launch time for the boats due to more trained personnel in the vicinity of the rescue squad.

Mitigation strategy:

Train the city and county hazardous materials technicians for enhanced responses to river releases and deployment of spill response equipment. The ability to rapidly respond to a hazardous materials release with properly trained and equipped personnel will decrease the extent of the release and the impact on the environment.

Alternatives:

1. Continue to rely exclusively on rescue squad members for boat operations which would severely limit response capabilities.

Lead Agency:

Montgomery County Emergency Management Agency

Implementation schedule:

Upon Plan approval, based on benefit-cost analysis review

Source of Funding:

City/County General Funds

Estimated Cost: $30,000

ALL HAZARDS

Objectives and Strategies

Objective: 1

Problem Statement:

Lack of public awareness about the impact of natural and man-made hazards on our community and the actions to take to protect their homes, their property, and their lives.

Mitigation Strategy:

Continue with Public Awareness Programs to inform the public of the dangers of these hazards and actions to take to protect themselves, their families, and their property.

Lead Agency:

Montgomery County Emergency Management Agency

Implementation schedule:

Implemented and ongoing

Source of funding:

City/County General Funds, grants

Estimated Cost: $5,000 - $10,000 per year

Objective: 2

Problem Statement:

The Hazard Mitigation Planning capabilities need to be continually upgraded with training and equipment.

Mitigation Strategy:

Continually evaluate (at least annually), improve, and implement the current local Hazard Mitigation Planning process for the purpose of eliminating risks associated with natural and manmade hazards. Purchase equipment, software, training, and other needs to support the Montgomery County Hazard Mitigation Committee and their mission.

Lead Agency:

Montgomery County Emergency Management Agency

Implementation Schedule:

Implemented and ongoing

Source of Funding:

FEMA Hazard Mitigation Grant funds, City/County General Funds

Estimated Cost: $20,000 per year

Objective: 3

Problem Statement:

While HAZUS-MH is currently being utilized by the jurisdictions in planning for hazards, it is not the only source used due to the limitations of the software, and the training required to use it. Personnel changes within the jurisdictions also create the need for continuous training of the new personnel.

Mitigation Strategy:

Continue to send personnel to attend the courses related to HAZUS-MH and GIS training to learn how to fully utilize this software within its capabilities. Upgrade computers to be able to perform the software analysis along with full GIS capabilities. Upgrade to new versions of the software and utilize new training methods as they become available.

Lead Agency:

Montgomery County Emergency Management Agency

Implementation Schedule:

Implemented and ongoing

Source of Funding:

City/County General Funds, FEMA Hazard Mitigation Grant Funds

Estimated Cost: $20,000

Objective: 4

Problem Statement:

The City of Clarksville-Montgomery County School System locations are spread across the county. Some of the schools located within the city limits are within range of current siren warning systems. Considering the student population is not always inside of a building where some protection exists from hazards, along with after school sports events when the buildings might not be readily available. The ability to provide early warning through sirens is an important tool in keeping the children and staff safe. Future school complexes would require the siren installation as part of the construction process.

Mitigation Strategy:

Begin installing warning sirens on all of the Clarksville-Montgomery County School System complexes to allow for warning of impending hazards as soon as possible.

Lead Agency:

Clarksville-Montgomery County School System

Implementation Schedule:

Within five years after Plan approval, based on budgeting priorities.

Source of Funding:

County General Funds, Community Development Block Grants, FEMA Hazard Mitigation Grant Funds

Estimated Cost: $100,000 for current facilities

VI. PLAN MAINTENANCE

The Disaster Mitigation Act of 2000 requires that local plans be monitored, evaluated, and updated within a five-year cycle. The Montgomery County Emergency Management Agency as the lead agency for the Hazard Mitigation Team will continuously monitor and evaluate the Hazard Mitigation Plan. In an effort to comply with the requirements of the DMA 2000 the MCEMA will call meetings of the Hazard Mitigation Team at one the following times:

- Annually
- Following disaster events
- In the event of emerging hazards

Evaluation of this plan update began with a plan review by the Montgomery County Emergency Management Agency Planner, following the "Local Multi-Hazard Mitigation Planning Guidance, July 2008) protocol established by FEMA. As components of the plan update unfolded and were developed, each jurisdiction reviewed critical dimensions of the plan with senior management personnel within their jurisdictional agencies to insure that the leadership of the agencies was part of the process.
The following are some of the criteria that the Montgomery County Emergency Management Agency planner used as part of the evaluation of the plan during the scheduled hazard mitigation team meetings (annually, following a disaster, in the event of emerging hazards) :

- Are the goals and objectives addressed still current and in line with conditions?
- Have the nature, magnitude, and/or type of risks changed since the plan was approved?
- Are the current resources still appropriate as when the plan was implemented?
- Are there any implementation problems, technical, political, legal, or coordination issues with other agencies that need to be addressed?
- Are the hazard mitigation team members and other partners participating as intended?
- Are the requirements of the Local Mitigation Plan Review Crosswalk met?
- Has the Local Multi-Hazard Mitigation Planning Guidance, July 2008 requirements been addressed?

The information gathered from the above evaluation criteria will be used as part of the monitoring and evaluation process that will be incorporated into the plan maintenance and update processes.

The Hazard Mitigation Team will meet a minimum of once a year, while in some years it may be necessary to hold multiple meetings. Participation in mitigation planning training and continued modeling with HAZUS-MH and benefit-cost analyses will assist the Hazard Mitigation Team in refining the plan and modifying the plan to fit emerging needs.

Public involvement will be encouraged throughout the Plan maintenance process and in future mitigation project planning through public hearings. Also, the public will be invited to attend the meetings of Hazard Mitigation Team. These meetings and public hearings for projects will be advertised to the public through public notices and advertisements.

Should it be deemed necessary to modify the Plan such modifications will be appended to the Plan upon agreement of the Hazard Mitigation Team and TEMA officials. The modifications will then be submitted to TEMA and FEMA for inclusion in the current plan.

It is our intention to initiate the plan update process approximately 12 months prior to plan expiration. The County EMA will initiate the process, involving the partners' staff personnel designated by the various participating jurisdictions. The process will follow the then current protocol for plan revision activity, and will integrate the evaluative indicators suggested through the preceding four years' annual evaluations, plus additional expectations levied by the approving agency. Some of the update processes are listed below:

● Meetings of the Hazard Mitigation Team

● Information gathered from Hazard Mitigation Team monitoring or evaluation meetings (Annually, following a disaster, in the event of emerging hazards) during the current plan cycle.

● Information gathered from opportunities provided for the general public, businesses, academia, and any others with an interest in the hazard mitigation plan to review and comment on the plan.

● An updated evaluation of the plan

● The updated plan process should be completed and submitted for approval six months prior to the expiration of the current plan.

PLAN ADOPTION

Montgomery County Resolution

RESOLUTION <nn-2010>

A RESOLUTION ADOPTING THE MONTGOMERY COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS, the MONTGOMERY COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN (the 'Plan') was developed in accordance with and following the guidelines and requirements established, published and provided by FEMA and TEMA, and;

WHEREAS, Montgomery County and its various departments, agencies, and operating units actively participated in and contributed to the preparation and development of the 'Plan', and;

WHEREAS, the 'Plan' has been developed to guide each participating jurisdiction in planning for and mitigating local hazards, and;

WHEREAS, the completion and adoption of a hazard mitigation plan is a condition of qualification for potential future mitigation funding.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNTY COMMISSION OF THE COUNTY OF MONTGOMERY, TENNESSEE:

That the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan is hereby adopted.

_____
Mayor

ATTEST:

_____
County Official

ADOPTED:

Clarksville City Resolution to Adopt

RESOLUTION <nn-2010>

A RESOLUTION ADOPTING THE MONTGOMERY COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS, the MONTGOMERY COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN (the 'Plan') was developed in accordance with and following the guidelines and requirements established, published and provided by FEMA and TEMA, and;

WHEREAS, the City and its various departments, agencies, and operating units actively participated in and contributed to the preparation and development of the 'Plan', and;

WHEREAS, the 'Plan' has been developed to guide each participating jurisdiction in planning for and mitigating local hazards, and;

WHEREAS, the completion and adoption of a hazard mitigation plan is a condition of qualification for potential future mitigation funding.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CLARKSVILLE, TENNESSEE:

That the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan is hereby adopted.

_____
Mayor

ATTEST:

_____
City Clerk

ADOPTED:

Clarksville-Montgomery County School System
Resolution to Adopt

RESOLUTION <nn-2010>

A RESOLUTION ADOPTING THE MONTGOMERY COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS, the MONTGOMERY COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN (the 'Plan') was developed in accordance with and following the guidelines and requirements established, published and provided by FEMA and TEMA, and;

WHEREAS, the Clarksville-Montgomery County School System and its various departments, agencies, and operating units actively participated in and contributed to the preparation and development of the 'Plan', and;

WHEREAS, the 'Plan' has been developed to guide each participating jurisdiction in planning for and mitigating local hazards, and;

WHEREAS, the completion and adoption of a hazard mitigation plan is a condition of qualification for potential future mitigation funding.

NOW, THEREFORE, BE IT RESOLVED BY THE CLARKSVILLE-MONTGOMERY COUNTY SCHOOL SYSTEM, TENNESSEE:

That the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan is hereby adopted.

_____
Director

ATTEST:

_____
Board Secretary

ADOPTED:

VIII HAZARD MITIGATION PLAN APPENDIX'S

TABLE OF CONTENTS

APPENDIX 1

Hazard Mitigation Team

1. Rodney Grimsley – Montgomery County Emergency Management Agency (Planner)
2. Ron McClurg - City Finance (Grants Manager)
3. Gary Busch – Clarksville Gas & Water (Safety Coordinator)
4. Kenny Vaughan - Clarksville Gas & Water (Water Treatment Plant Superintendent)
5. Earl Snyder – Clarksville Department of Electricity (Vice President of Operations)
6. Randy Holt – Cumberland Electric Membership Corporation (Operations Manager)
7. Mike Evans – Industrial Development Board (Director)
8. Jack Frazier – Clarksville Street Department (Senior Engineer)
9. Mike Frost – Montgomery Co. Highway Dept. (Supervisor)
10. Rod Streeter – Montgomery Co. Building & Codes (Commissioner)
11. John Doss – Montgomery Co. Storm Water (Coordinator)
12. Audrea Harris – Regional Planning Commission (Planning Manager)
13. Mike Wilson – Austin Peay State University GIS Center (Manager)
14. Howell Albright – Clarksville Fire Rescue (Assistant Chief)
15. Mike Baker – Clarksville Building & Codes
16. Sharla Adams – Clarksville-Montgomery County School System (Injury Nurse Consultant)
17. Tommy Butler - Clarksville-Montgomery County School System (Risk Manager)

APPENDIX 2

To: Hazard Mitigation Plan Team Members
Re: Five year plan update

The current hazard mitigation plan expires on September 5, 2010. The process for plan maintenance requires at least one meeting per year to review the plan for any needed changes. Most of you remember that we had our last meeting on December 5, 2008 to discuss the process of combining the City of Clarksville Plan with the Montgomery County Plan.

FEMA approved the updated plan in June of 2009, but the combined plan was not considered eligible for use as a five year update because it was submitted over one year prior to the expiration date of the current Montgomery County Plan.

Due to the time frames established for review by TEMA and FEMA the update must be received at TEMA no later than February 5, 2010. I have scheduled a team meeting for September 11, 2009 at 1 PM in the EOC to review the steps to prepare the plan for submittal to TEMA.

The meeting should not take more than one hour.

Rodney A. Grimsley
Planner
Montgomery Co. EMA

Hazard Mitigation Team Meeting

The members of the Hazard Mitigation Team met on Friday September 11, 2009 at 1:00PM in the Montgomery County Emergency Operations Center.

The yearly plan maintenance meeting as required by the Disaster Mitigation Act of 2000 was called to discuss the status of the current combined plan which incorporated the City of Clarksville into the Montgomery County plan in June of 2009.

The second objective of the meeting was to discuss the five year plan update process that began in August 2009. The members were asked to review the current plan and submit any changes via email to the Rodney Grimsley by September 24, 2009, so that the requested changes could be sent to all of the members via email before incorporation into the update draft document.

The third objective was the addition of two representatives from the Clarksville-Montgomery County School System to the team to take part in the planning process. Also, the rest of the members were briefed on how the school system became a “local government” in reference to hazard mitigation, and the benefit of having the school system take part in the planning process.

A Power Point presentation was delivered to show the members the steps that are involved in the update process.

Members that attended the meeting:

Rodney Grimsley, Planner, Montgomery County EMA, Lead Agency
Ron McClurg, Grants Manager, City of Clarksville
John Doss, Storm Water Coordinator, Montgomery County Building and Codes
Jack Frazier, Engineering Manager, Clarksville Street Department
Jeff Bryant, Civil Engineer, Clarksville Street Department
Audrea Harris, Planning Manager, Regional Planning Commission
Douglas Catellier, GIS Analyst, Austin Peay State University GIS Center
Howell Albright, Assistant Chief, Clarksville Fire/Rescue
Sharla Adams, Clarksville-Montgomery County School System (Injury Nurse Consultant)
Tommy Butler, Clarksville-Montgomery County School System (Risk Manager)

Submitted by
Rodney A. Grimsley
Planner
Montgomery Co. EMA

HAZMIT TEAM/Public COMMENTS
(Plan Update Draft)

9/1/09
Team Members
I have attached a copy of the combined city/county plan that FEMA approved this year, for each member of the team to review before the meeting that is scheduled for September 11, 2009 at 1PM.
If you see information such as the number of residences & businesses, replacement cost for facilities, etc. that has changed since the plan was completed please bring the information with you to the meeting or send it by email.
Please let me know by email if you will be able to attend the meeting.
Thanks
Rodney
Rodney A. Grimsley
Planner
Montgomery County Emergency Management Agency
931-648-5702

9/16/09
Team Members
I have attached a summary of the meeting that was held on September 11, 2009, along with the power point presentation for those members that were not able to attend.
Thanks
Rodney
Rodney A. Grimsley
Planner
Montgomery County Emergency Management Agency
931-648-5702

9/16/09
Rodney, I apologize that I had to miss the meeting scheduled for September 11th. I do understand the importance in this matter and will do whatever is needed. Thank you for the information and look forward to working with you and the other team members in the future.
Earl Snyder
Vice President of Operations
CDE Lightband

9/21/09
Rodney, I did not have any additional comments.
Audrea McCain Harris
Planning Manager
Regional Planning Commission

9/25/09
We have reviewed each section of the Montgomery County Multi- Jurisdictional Hazard Mitigation Plan. This review included each section 1 and section 8 including all appendixes.
At this point we have no recommendations for changes to be included in this draft of the plan and have no objectives and strategies to add beyond the ones currently listed in the plan for our county.
Tommy Butler
Clarksville-Montgomery County School System, Risk Manager

10/5/2009
One editorial change on p 8 regarding corporate name of Hemlock Semiconductor. Else, have re-read all and find all to be acceptable.
Ron McClurg
City of Clarksville, Grants Manager

10/5/2009
Rodney:
I have reviewed the plan and have no suggestions for improvement. I will get with Rod Streeter and see if he has any suggestions and get back to you ASAP.
Thanks,
John H. Doss
Montgomery County, TN.
Storm Water Coordinator

12/7/2009
Team members:
The final draft public viewing period ended on December 4, 2009. The plan update was cross walked with our TEMA Area Coordinator Friday afternoon. The update will be sent to the TEMA mitigation personnel to review today. After TEMA reviews the plan it will be sent to FEMA.

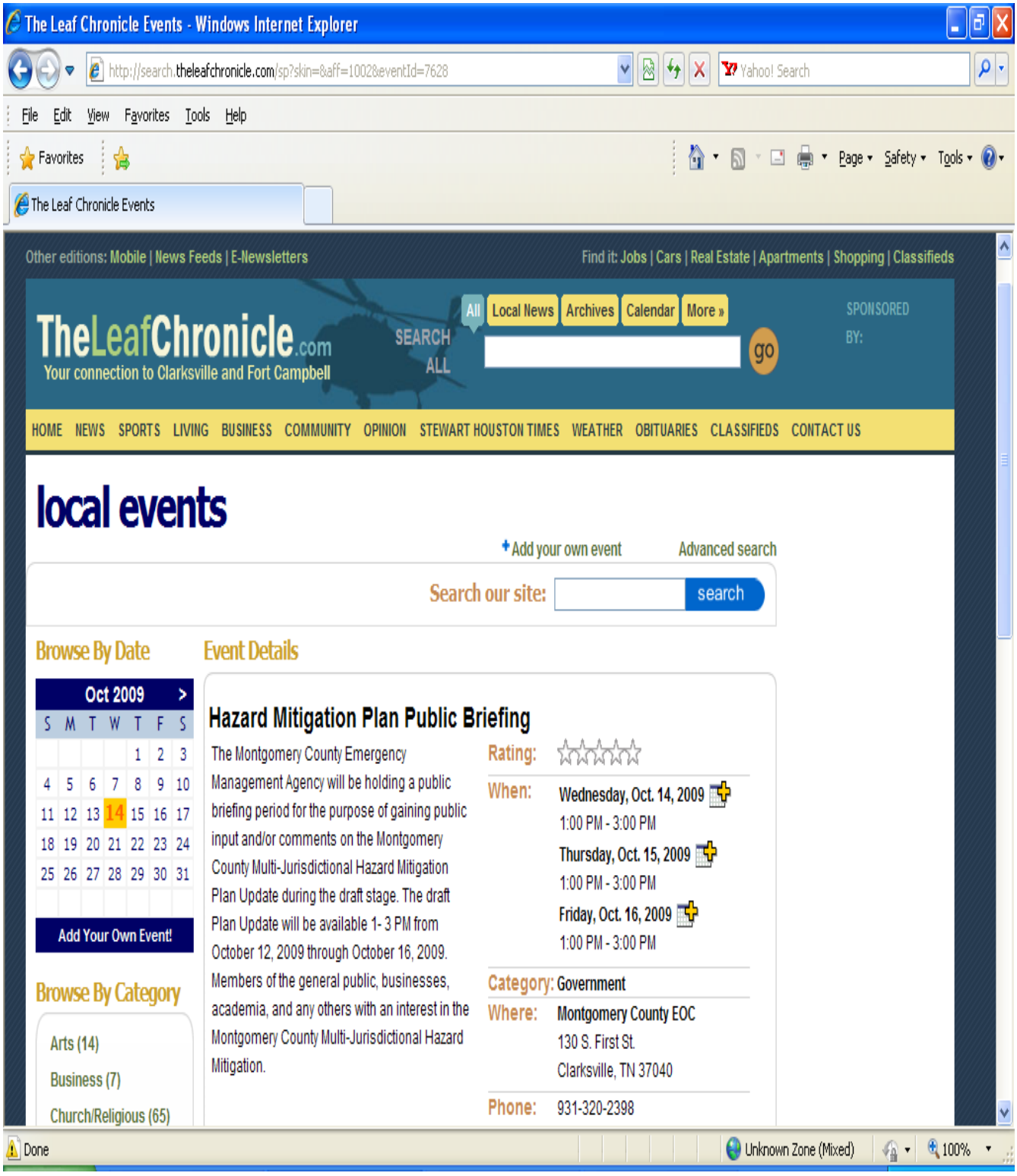
Thanks,
Rodney Grimsley
Montgomery County EMA
Planner

APPENDIX 3

PUBLIC BRIEFING

The Montgomery County Emergency Management Agency will be holding a public briefing period for the purpose of gaining public input and/or comments on the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan Update during the draft stage. The draft Plan Update will be available 1- 3 PM from October 12, 2009 through October 16, 2009.

Members of the general public, businesses, academia, and any others with an interest in the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan Update are invited to call Rodney Grimsley at 648-5702 to schedule a review time.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Rating:
When: Wednesday, Oct. 14, 2009
1:00 PM - 3:00 PM
Thursday, Oct. 15, 2009
1:00 PM - 3:00 PM
Friday, Oct. 16, 2009
1:00 PM - 3:00 PM
Category: Government
Where: Montgomery County EOC
130 S. First St.
Clarksville, TN 37040
Phone: 931-320-2398
Done
Unknown Zone (Mixed)
100%


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I invite you to browse our website and see all that Montgomery County has to offer.
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Hazard Mitigation Plan To Be Updated
The Montgomery County Emergency Management Agency will be holding a public briefing period for the purpose of gaining public input and/or comments on the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan Update during the draft stage. The draft Plan Update will be available 1- 3 PM from October 12 through October 16, 2009. Members of the general public, businesses, academia, and any others with an interest in the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan Update are invited to call Rodney Grimsley at 648-5702 to schedule a review time.
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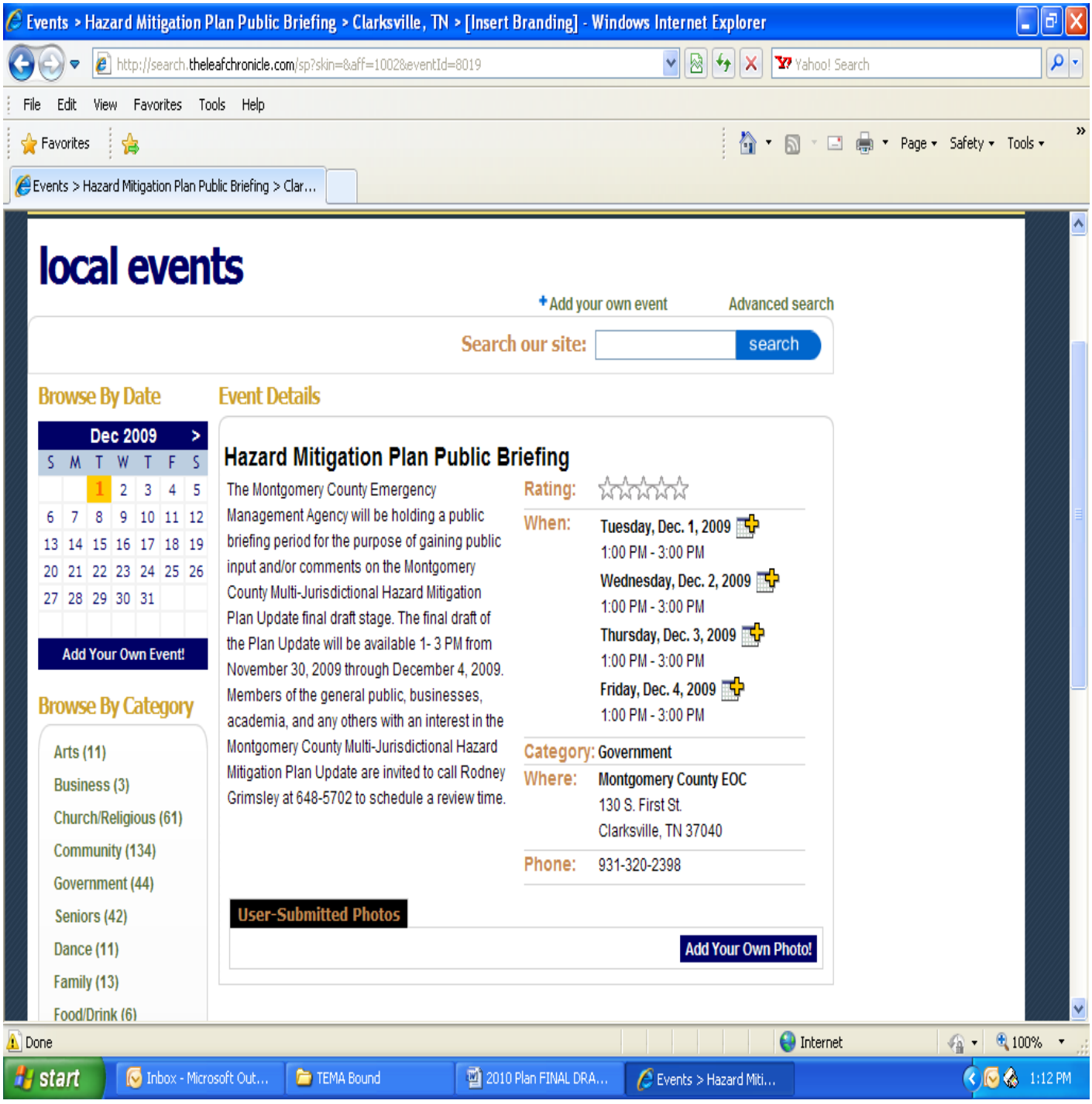
PUBLIC BRIEFING

The Montgomery County Emergency Management Agency will be holding a public briefing period for the purpose of gaining public input and/or comments on the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan Update final draft stage. The final draft of the Plan Update will be available 1- 3 PM from November 30, 2009 through December 4, 2009.

Members of the general public, businesses, academia, and any others with an interest in the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan Update are invited to call Rodney Grimsley at 648-5702 to schedule a review time.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Dec 2009
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Dance (11)
Family (13)
Food/Drink (6)
Hazard Mitigation Plan Public Briefing
The Montgomery County Emergency Management Agency will be holding a public briefing period for the purpose of gaining public input and/or comments on the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan Update final draft stage. The final draft of the Plan Update will be available 1- 3 PM from November 30, 2009 through December 4, 2009. Members of the general public, businesses, academia, and any others with an interest in the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan Update are invited to call Rodney Grimsley at 648-5702 to schedule a review time.
Rating:
When:
Tuesday, Dec. 1, 2009
1:00 PM - 3:00 PM
Wednesday, Dec. 2, 2009
1:00 PM - 3:00 PM
Thursday, Dec. 3, 2009
1:00 PM - 3:00 PM
Friday, Dec. 4, 2009
1:00 PM - 3:00 PM
Category: Government
Where: Montgomery County EOC
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Hazard Mitigation Plan To Be Updated
The Montgomery County Emergency Management Agency will be holding a public briefing period for the purpose of gaining public input and/or comments on the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan Update during the final draft stage. The final draft plan update will be available from 1 to 3 p.m. from November 30 to December 4, 2009. Members of the general public, businesses, academia, and any others with an interest in the Montgomery County Multi-Jurisdictional Hazard Mitigation Plan Update are invited to call Rodney Grimsley at 648-5702 to schedule a review time.
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APPENDIX 4 Flood

Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
1 Clarksville	03/29/1994	1200	Flash Flooding	N/A	0	0	50K	0
2 Clarksville	05/18/1995	0930	Flash Flooding	N/A	0	0	5K	0
3 Clarksville	08/09/1995	1145	Flash Flood	N/A	0	0	0	0
4 Clarksville	12/16/1996	10:35 PM	Flash Flood	N/A	0	0	0	0
5 Clarksville	02/04/1997	01:40 AM	Flash Flood	N/A	0	0	10K	0
6 Countywide	02/04/1997	03:06 AM	Flash Flood	N/A	0	0	0	0
7 Countywide	02/04/1997	05:45 AM	Flash Flood	N/A	0	0	0	0
8 Countywide	03/01/1997	03:00 PM	Flash Flood	N/A	0	0	0	0
9 Countywide	03/01/1997	09:20 PM	Flash Flood	N/A	0	0	10K	0
10 Clarksville	03/02/1997	03:15 PM	Flood	N/A	0	0	0	0
11 TNZ006	03/02/1997	12:00 AM	Flood	N/A	0	0	500K	0
12 Clarksville	03/02/1997	12:30 AM	Flash Flood	N/A	0	0	500K	0
13 Countywide	03/05/1997	01:00 PM	Flash Flood	N/A	0	0	0	0
14 Clarksville	06/13/1997	11:30 PM	Flash Flood	N/A	0	0	0	0
15 Clarksville	06/28/1997	08:33 AM	Flash Flood	N/A	0	0	10K	0
16 Clarksville	06/30/1997	02:05 PM	Flash Flood	N/A	0	0	0	0
17 Clarksville	06/10/1998	10:10 AM	Flash Flood	N/A	0	0	0	0
18 Port Royal	06/10/1998	10:10 AM	Flash Flood	N/A	0	0	0	0

19 Clarksville	07/23/1998	07:43 PM	Flash Flood	N/A	0	0	50K	0
20 St Bethlehem	01/22/1999	04:30 PM	Flood	N/A	0	0	0	0
21 Clarksville	05/05/1999	10:00 PM	Flash Flood	N/A	0	0	50K	0
22 Clarksville	07/02/1999	08:15 AM	Flash Flood	N/A	0	0	0	0
23 St Bethlehem	07/02/1999	10:00 AM	Flash Flood	N/A	0	0	0	0
24 Clarksville	05/04/2000	07:00 PM	Flash Flood	N/A	0	0	0	0
25 West Portion	11/29/2001	02:00 AM	Flash Flood	N/A	0	0	0	0
26 TNZ005>006 - 022	12/12/2001	04:55 PM	Flood	N/A	0	0	0	0
27 Countywide	03/17/2002	11:00 PM	Flash Flood	N/A	0	0	0	0
28 South Portion	03/20/2002	06:00 AM	Flash Flood	N/A	0	0	0	0
29 Clarksville	09/27/2002	12:12 AM	Urban/sml Stream Fld	N/A	1	0	0	0
30 Clarksville	05/07/2003	12:25 AM	Flash Flood	N/A	0	0	0	0
31 Clarksville	06/18/2003	03:30 AM	Flash Flood	N/A	0	0	0	0
32 Countywide	06/18/2003	04:00 AM	Flash Flood	N/A	0	0	0	0
33 Clarksville	08/04/2004	09:35 PM	Flash Flood	N/A	0	0	10K	0
34 Clarksville	08/04/2004	09:40 PM	Flash Flood	N/A	0	0	1K	0
35 Clarksville	12/07/2004	03:43 AM	Flash Flood	N/A	0	0	1K	0
36 Clarksville	05/09/2009	01:40 AM	Flash Flood	N/A	0	0	300K	0K
				TOTALS:	1	0	1.497M	0

APPENDIX 5 Tornado

Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
1 MONTGOMERY	11/18/1957	0400	Tornado	F1	0	0	3K	0
2 MONTGOMERY	04/25/1961	1815	Tornado	F2	0	2	25K	0
3 MONTGOMERY	04/27/1970	1400	Tornado	F4	0	0	2.5M	0
4 MONTGOMERY	07/03/1970	1850	Tornado	F1	0	1	25K	0
5 MONTGOMERY	05/07/1971	2115	Tornado	F0	0	0	0K	0
6 MONTGOMERY	05/22/1973	1915	Tornado	F1	0	0	0K	0
7 MONTGOMERY	05/07/1984	1300	Tornado	F1	0	0	0K	0
8 MONTGOMERY	08/30/1985	1900	Tornado	F1	0	0	0K	0
9 Ft Campbell	06/17/1997	06:13 PM	Tornado	F0	0	0	130K	0
10 Hilltop	04/03/1998	02:10 PM	Tornado	F2	0	0	100K	0
11 Port Royal	04/16/1998	09:18 AM	Tornado	F2	0	0	10K	0
12 Woodlawn	01/17/1999	07:28 PM	Tornado	F1	0	0	20K	0
13 Clarksville	01/22/1999	04:15 AM	Tornado	F3	0	5	72.7M	0
14 Clarksville	05/05/1999	05:58 PM	Tornado	F0	0	0	0	0
15 Clarksville	05/27/2000	02:10 PM	Tornado	F0	0	0	0	0
16 Port Royal	11/10/2002	01:00 AM	Tornado	F1	2	0	100K	0
17 Clarksville	11/10/2002	12:50 AM	Tornado	F0	0	0	0	0
18 Clarksville	05/04/2003	11:53 PM	Tornado	F3	0	1	750K	0
19 Shiloh	11/15/2005	04:35 PM	Tornado	F1	0	0	500K	0
20 Cunningham	11/15/2005	04:36 PM	Tornado	F1	0	0	600K	0

21 Cunningham	11/15/2005	04:37 PM	Tornado	F0	0	0	0	0
22 Clarksville	11/15/2005	04:44 PM	Tornado	F2	0	0	500K	0
23 Clarksville	09/23/2006	03:00 AM	Tornado	F0	0	0	40K	0
24 Shiloh	05/02/2008	22:57 PM	Tornado	F1	0	0	5K	0K
25 Shiloh	05/02/2008	23:00 PM	Tornado	F1	0	0	20K	0K
26 Palmyra	05/02/2008	23:05 PM	Tornado	F1	0	3	20K	0K
27 Cumberland Hgts	05/02/2008	23:10 PM	Tornado	F1	0	0	100K	0K
				TOTALS:	2	12	78.148M	0

APPENDIX 6 Snow/Ice Storms

Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
1 TNZ001>010 - 016	02/21/1993	1300	Snow	N/A	0	0	5K	0
2 TNZ001>008 - 016	03/12/1993	1500	Winter Storm	N/A	1	2	500K	5.0M
3 TNZ001>102	01/16/1994	1800	Snow	N/A	0	0	5K	0
4 TNZ03>13;20>35 - 42>66 - 75>82 - 84 - 85 - 88>97 - 100 - 101	02/09/1994	2000	Ice Storm	N/A	0	0	500K	0
5 TNZ006>018 - 025>047 - 059 - 075>087 - 097>102	01/17/1995	0400	Heavy Snow	N/A	0	0	0	0
6 Southwest And	01/17/1995	1700	Ice	N/A	0	0	500K	0
7 TNZ001>102	02/07/1995	1200	Snow	N/A	0	0	1K	0
8 TNZ005>011 - 022>031 - 033 - 055>065 - 075>082 - 093>098	01/06/1996	05:00 PM	Winter Storm	N/A	0	0	10K	0
9 TNZ005>008 - 022>028 - 055>060 - 062	01/06/1996	05:50 AM	Winter Storm	N/A	0	0	0	0
10 TNZ006>009 - 027 - 032>033 - 059	03/19/1996	01:00 AM	Heavy Snow	N/A	0	0	5K	0
11 TNZ006>011 - 022>023 - 025>029 - 032>033 - 033>034 - 056>062 - 062>066 - 075>080 - 094>097 - 097	12/23/1998	07:30 AM	Winter Storm	N/A	0	11	1.5M	0
12 TNZ006>007 - 009>011 - 025 - 027 - 029>034 - 057 - 064>066 - 080	01/22/2000	02:30 PM	Winter Storm	N/A	0	0	0	0
13 TNZ005>011 - 022>034 - 064	12/04/2002	06:00 AM	Winter Storm	N/A	0	0	0	0
14 TNZ005>010 - 022>031 - 056>057 - 059>060 - 062>064 -	01/16/2003	11:00 AM	Heavy Snow	N/A	0	0	0	0

077								
15 TNZ005>006 - 008 - 022 - 025 - 027>028 - 031>032 - 062 - 066 - 077 - 079>080	02/09/2003	09:00 PM	Heavy Snow	N/A	0	0	0	0
16 TNZ005>006 - 022>025	12/22/2004	08:00 PM	Winter Storm	N/A	0	6	0	0
17 TNZ006>008 - 032 - 034 - 062 - 094	02/10/2006	10:00 PM	Heavy Snow	N/A	0	0	0	0
18 TNZ006 - 024>026 - 057>058 - 060	03/07/2008	18:00 PM	Winter Storm	N/A	0	0	0K	0K
19 TNZ005>008 - 022	01/27/2009	00:00 AM	Ice Storm	N/A	0	0	0K	0K
20 TNZ006	01/28/2009	06:00 AM	Winter Weather	N/A	0	0	0K	0K
				TOTALS:	1	19	3.026M	5.000M

APPENDIX 7 Thunder Storms/High Winds

Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
1 MONTGOMERY	03/20/1955	1600	Tstm Wind	0 kts.	0	0	0	0
2 MONTGOMERY	08/07/1962	0830	Tstm Wind	0 kts.	0	0	0	0
3 MONTGOMERY	01/19/1964	2215	Tstm Wind	0 kts.	0	0	0	0
4 MONTGOMERY	09/16/1965	0200	Tstm Wind	0 kts.	0	0	0	0
5 MONTGOMERY	11/19/1970	2240	Tstm Wind	0 kts.	0	0	0	0
6 MONTGOMERY	07/27/1972	2330	Tstm Wind	0 kts.	0	0	0	0
7 MONTGOMERY	06/22/1974	1500	Tstm Wind	0 kts.	0	0	0	0
8 MONTGOMERY	07/07/1974	1730	Tstm Wind	0 kts.	0	0	0	0
9 MONTGOMERY	07/19/1974	2300	Tstm Wind	0 kts.	0	0	0	0
10 MONTGOMERY	01/10/1975	1340	Tstm Wind	0 kts.	0	0	0	0
11 MONTGOMERY	03/20/1976	1845	Tstm Wind	85 kts.	0	0	0	0
12 MONTGOMERY	03/20/1976	1900	Tstm Wind	0 kts.	0	0	0	0
13 MONTGOMERY	06/12/1977	1630	Tstm Wind	57 kts.	0	0	0	0
14 MONTGOMERY	07/13/1978	1115	Tstm Wind	0 kts.	0	0	0	0
15 MONTGOMERY	05/22/1982	1600	Tstm Wind	0 kts.	0	0	0	0
16 MONTGOMERY	05/28/1982	2020	Tstm Wind	0 kts.	0	0	0	0
17 MONTGOMERY	12/25/1982	1800	Tstm Wind	0 kts.	0	0	0	0

18 MONTGOMERY	08/28/1983	1720	Tstm Wind	0 kts.	0	0	0	0
19 MONTGOMERY	03/24/1984	2100	Tstm Wind	0 kts.	0	0	0	0
20 MONTGOMERY	06/23/1984	1000	Tstm Wind	0 kts.	0	0	0	0
21 MONTGOMERY	07/05/1985	1430	Tstm Wind	0 kts.	0	0	0	0
22 MONTGOMERY	10/02/1986	1445	Tstm Wind	0 kts.	0	0	0	0
23 MONTGOMERY	07/05/1987	1600	Tstm Wind	0 kts.	0	0	0	0
24 MONTGOMERY	11/04/1988	1630	Tstm Wind	0 kts.	0	0	0	0
25 MONTGOMERY	06/12/1989	1330	Tstm Wind	0 kts.	0	0	0	0
26 MONTGOMERY	06/03/1990	0300	Tstm Wind	0 kts.	0	0	0	0
27 MONTGOMERY	06/06/1990	1700	Tstm Wind	0 kts.	0	0	0	0
28 MONTGOMERY	09/07/1990	1530	Tstm Wind	0 kts.	0	0	0	0
29 MONTGOMERY	04/09/1991	1145	Tstm Wind	0 kts.	0	0	0	0
30 MONTGOMERY	06/04/1991	1320	Tstm Wind	0 kts.	0	0	0	0
31 MONTGOMERY	05/12/1992	1710	Tstm Wind	0 kts.	0	0	0	0
32 MONTGOMERY	06/25/1992	1700	Tstm Wind	0 kts.	0	0	0	0
33 MONTGOMERY	07/03/1992	0130	Tstm Wind	0 kts.	0	0	0	0
34 MONTGOMERY	09/10/1992	0220	Tstm Wind	0 kts.	0	0	0	0
35 Clarksville	05/06/1993	1730	Thunderstorm Winds	0 kts.	0	0	5K	0
36 Clarksville	12/13/1993	2030	High Winds	0	0	0	1K	0

				kts.				
37 Clarksville	06/21/1994	1222	Thunderstorm Winds	0 kts.	0	0	1K	0
38 Clarksville	06/22/1994	0015	Thunderstorm Winds	0 kts.	0	0	1K	0
39 TNZ004>010 - 021>033 - 040>047 - 052>065 - 071 - 075>078 - 089>097	04/11/1995	0630	High Winds	0 kts.	0	4	1.0M	0
40 Clarksville	05/14/1995	1630	Thunderstorm Winds	0 kts.	0	0	5K	0
41 Clarksville	06/06/1995	1545	Thunderstorm Winds	0 kts.	0	0	5K	0
42 Clarksville	06/07/1995	1750	Thunderstorm Winds	0 kts.	0	0	2K	0
43 Clarksville	07/22/1995	1345	Thunderstorm Winds	0 kts.	0	0	0.0M	0
44 Clarksville	07/24/1995	1315	Thunderstorm Winds	0 kts.	0	0	5K	0
45 Clarksville	08/08/1995	1110	Thunderstorm Winds	0 kts.	0	0	0K	0
46 Clarksville	03/16/1996	01:45 PM	Tstm Wind	0 kts.	0	0	1K	0
47 Port Royal	03/16/1996	02:00 PM	Tstm Wind	0 kts.	0	0	20K	0
48 Countywide	04/20/1996	01:40 AM	Tstm Wind	0 kts.	0	0	0	0
49 Woodlawn	04/20/1996	01:45 AM	Tstm Wind	0 kts.	0	0	0	0
50 Clarksville	05/27/1996	01:30 PM	Tstm Wind	50 kts.	0	0	0	0
51 Clarksville	06/15/1996	05:25 PM	Tstm Wind	50 kts.	0	0	0	0
52 Dotsonville	06/23/1996	07:58 PM	Tstm Wind	0 kts.	0	0	1K	0
53 Clarksville	06/23/1996	08:05 PM	Tstm Wind	50 kts.	0	0	0	0

54 Clarksville	07/21/1996	07:33 PM	Tstm Wind	50 kts.	0	0	3K	0
55 Clarksville	07/29/1996	10:45 AM	Tstm Wind	0 kts.	0	0	0K	0
56 Countywide	09/27/1996	02:45 AM	Tstm Wind	50 kts.	0	0	0	0
57 Clarksville	11/07/1996	12:30 PM	Tstm Wind	50 kts.	0	0	1K	0
58 Countywide	02/21/1997	07:40 AM	Tstm Wind	50 kts.	0	0	0	0
59 Cunningham	05/26/1997	08:55 AM	Tstm Wind	50 kts.	0	0	0	0
60 Clarksville	06/13/1997	06:00 PM	Tstm Wind	0 kts.	0	0	20K	0
61 Clarksville	07/04/1997	03:00 AM	Tstm Wind	0 kts.	0	0	15K	0
62 Clarksville	07/04/1997	03:25 AM	Tstm Wind	0 kts.	0	0	1K	0
63 Clarksville	07/14/1997	08:15 PM	Tstm Wind	50 kts.	0	0	0	0
64 Port Royal	07/14/1997	08:15 PM	Tstm Wind	50 kts.	0	0	0	0
65 Clarksville	07/28/1997	05:40 PM	Tstm Wind	50 kts.	0	0	0	0
66 Hilltop	04/03/1998	02:20 PM	Tstm Wind	80 kts.	0	0	100K	0
67 Clarksville	04/08/1998	11:00 AM	Tstm Wind	60 kts.	0	0	0	0
68 Northwest Portion	04/08/1998	11:05 AM	Tstm Wind	50 kts.	0	0	0	0
69 Clarksville	05/21/1998	05:00 PM	Tstm Wind	0 kts.	0	0	80K	0
70 Clarksville	05/21/1998	05:10 PM	Tstm Wind	50 kts.	0	0	0	0
71 Woodlawn	05/25/1998	06:20 PM	Tstm Wind	50 kts.	0	0	0	0
72 Mc Allisters Xrds	05/31/1998	09:30	Tstm Wind	57	0	0	0	0

		PM		kts.				
73 Clarksville	11/10/1998	09:45 AM	Tstm Wind	50 kts.	0	0	1K	0
74 Clarksville	01/17/1999	07:53 PM	Tstm Wind	0 kts.	0	0	5K	0
75 Sango	02/07/1999	04:00 AM	Tstm Wind	50 kts.	0	0	0	0
76 Clarksville	06/04/1999	09:30 PM	Tstm Wind	50 kts.	0	0	0	0
77 Clarksville	06/04/1999	09:57 PM	Tstm Wind	52 kts.	0	0	0	0
78 Clarksville	06/04/1999	10:10 PM	Tstm Wind	50 kts.	0	0	0	0
79 Cunningham	06/04/1999	10:23 PM	Tstm Wind	52 kts.	0	0	0	0
80 Clarksville	06/28/1999	01:45 PM	Tstm Wind	50 kts.	0	0	0	0
81 Clarksville	07/01/1999	08:10 PM	Tstm Wind	50 kts.	0	0	0	0
82 Countywide	07/01/1999	10:35 PM	Tstm Wind	50 kts.	0	0	50K	0
83 Countywide	02/18/2000	06:20 PM	Tstm Wind	50 kts.	0	0	0	0
84 Clarksville	04/17/2000	01:00 AM	Tstm Wind	60 kts.	0	0	0	0
85 Clarksville	04/20/2000	04:00 PM	Tstm Wind	50 kts.	0	0	0	0
86 Clarksville	05/13/2000	01:45 AM	Tstm Wind	50 kts.	0	0	0	0
87 Countywide	05/24/2000	08:42 PM	Tstm Wind	50 kts.	0	0	0	0
88 Clarksville	05/26/2000	06:10 PM	Tstm Wind	55 kts.	0	0	5K	0
89 Hilltop	05/27/2000	02:20 PM	Tstm Wind	60 kts.	0	0	10K	0
90 Clarksville	07/12/2000	12:45 PM	Tstm Wind	50 kts.	0	0	0	0

91 Clarksville	08/03/2000	06:05 PM	Tstm Wind	52 kts.	0	0	0	0
92 Clarksville	08/03/2000	06:10 PM	Tstm Wind	52 kts.	0	0	0	0
93 Clarksville	08/04/2000	03:30 AM	Tstm Wind	60 kts.	0	0	0	0
94 Clarksville	11/09/2000	11:05 AM	Tstm Wind	50 kts.	0	0	0	0
95 Clarksville	02/24/2001	11:30 PM	Tstm Wind	50 kts.	0	0	0	0
96 Woodlawn	05/07/2001	03:40 PM	Tstm Wind	50 kts.	0	0	0	0
97 Countywide	05/20/2001	04:00 AM	Tstm Wind	50 kts.	0	0	0	0
98 TNZ006 - 008>009 - 024>028 - 057 - 059 - 062	06/04/2001	07:12 PM	High Wind	52 kts.	0	0	0	0
99 Woodlawn	06/27/2001	02:41 PM	Tstm Wind	61 kts.	0	0	0	0
100 Clarksville	07/18/2001	04:50 PM	Tstm Wind	50 kts.	0	0	0	0
101 Clarksville	08/26/2001	08:00 PM	Tstm Wind	55 kts.	0	0	5K	0
102 Clarksville	09/06/2001	06:00 PM	Tstm Wind	50 kts.	0	0	0	0
103 Countywide	10/24/2001	06:15 PM	Tstm Wind	50 kts.	0	0	0	0
104 Clarksville	11/24/2001	09:10 AM	Tstm Wind	50 kts.	0	0	0	0
105 Clarksville	04/28/2002	04:00 AM	Tstm Wind	55 kts.	0	0	0	0
106 Countywide	05/13/2002	08:20 AM	Tstm Wind	50 kts.	0	0	0	0
107 South Portion	07/02/2002	11:19 PM	Tstm Wind	50 kts.	0	0	0	0
108 Dotsonville	07/02/2002	11:35 PM	Tstm Wind	50 kts.	0	0	0	0

109 Clarksville	07/02/2002	12:45 PM	Tstm Wind	50 kts.	0	0	0	0
110 Clarksville	07/03/2002	02:54 PM	Tstm Wind	50 kts.	0	0	0	0
111 Ft Campbell	07/10/2002	12:35 PM	Tstm Wind	50 kts.	0	0	0	0
112 Countywide	11/10/2002	06:00 PM	Tstm Wind	60 kts.	0	0	0	0
113 Clarksville	05/04/2003	11:44 PM	Tstm Wind	65 kts.	0	0	0	0
114 Clarksville	05/05/2003	12:15 AM	Tstm Wind	50 kts.	0	0	0	0
115 Clarksville	05/07/2003	12:25 AM	Tstm Wind	50 kts.	0	0	250K	0
116 Clarksville	07/28/2003	05:25 PM	Tstm Wind	50 kts.	0	0	0	0
117 Clarksville	07/28/2003	05:30 PM	Tstm Wind	55 kts.	0	0	0	0
118 Clarksville	07/28/2003	05:30 PM	Tstm Wind	60 kts.	0	0	0	0
119 Clarksville	08/29/2003	07:00 PM	Tstm Wind	50 kts.	0	0	0	0
120 Countywide	03/20/2004	01:10 PM	Tstm Wind	50 kts.	0	0	0	0
121 Clarksville	07/04/2004	02:25 PM	Tstm Wind	50 kts.	0	0	0	0
122 Clarksville	07/06/2004	02:50 PM	Tstm Wind	50 kts.	0	0	0	0
123 Clarksville	07/13/2004	08:15 PM	Tstm Wind	78 kts.	0	0	5K	0
124 Palmyra	10/14/2004	04:16 PM	Tstm Wind	50 kts.	0	0	5K	0
125 Hilltop	10/14/2004	04:22 PM	Tstm Wind	50 kts.	0	0	5K	0
126 Sango	10/14/2004	04:32 PM	Tstm Wind	50 kts.	0	0	10K	0
127 Clarksville	01/13/2005	07:30	Tstm Wind	50	0	0	0	0

		AM		kts.				
128 Clarksville	05/19/2005	12:40 PM	Tstm Wind	60 kts.	0	1	50K	0
129 Clarksville	05/19/2005	12:52 PM	Tstm Wind	50 kts.	0	0	0	0
130 TNZ005>008 - 011 - 022 - 024>028 - 031>034 - 059 - 062 - 064>066 - 078 - 080	08/30/2005	01:00 AM	Strong Wind	35 kts.	0	0	49K	0
131 Clarksville	11/06/2005	03:45 AM	Tstm Wind	50 kts.	0	0	0	0
132 Cumberland Hgts	04/02/2006	07:14 PM	Tstm Wind	55 kts.	0	0	2K	0
133 Woodlawn	04/02/2006	07:14 PM	Tstm Wind	55 kts.	0	0	5K	0
134 Woodlawn	04/02/2006	10:50 PM	Tstm Wind	55 kts.	0	0	4K	0
135 Clarksville	04/02/2006	10:55 PM	Tstm Wind	55 kts.	0	0	2K	0
136 Cunningham	04/02/2006	10:55 PM	Tstm Wind	50 kts.	0	0	0	0
137 Clarksville	04/02/2006	11:00 PM	Tstm Wind	55 kts.	0	0	5K	0
138 Clarksville	08/14/2006	08:00 PM	Tstm Wind	50 kts.	0	0	0	0
139 Clarksville	08/14/2006	08:00 PM	Tstm Wind	50 kts.	0	0	0	0
140 Cunningham	09/23/2006	02:50 AM	Tstm Wind	65 kts.	0	0	50K	80K
141 Clarksville	09/23/2006	03:00 AM	Tstm Wind	50 kts.	0	0	0	0
142 Woodlawn	09/27/2006	09:00 PM	Tstm Wind	50 kts.	0	0	0	0
143 Clarksville	02/20/2007	21:45 PM	Thunderstorm Wind	50 kts.	0	0	0K	0K
144 Palmyra	04/24/2007	12:17 PM	Thunderstorm Wind	50 kts.	0	0	0K	0K

145 Clarksville	04/24/2007	12:25 PM	Thunderstorm Wind	50 kts.	0	0	0K	0K
146 Clarksville	05/15/2007	18:45 PM	Thunderstorm Wind	50 kts.	0	0	0K	0K
147 Woodlawn	06/02/2007	16:15 PM	Thunderstorm Wind	50 kts.	0	0	1K	0K
148 Clarksville	06/24/2007	12:57 PM	Thunderstorm Wind	50 kts.	0	0	0K	0K
149 Ringgold	10/18/2007	21:30 PM	Thunderstorm Wind	50 kts.	0	0	0K	1K
150 Woodlawn	10/18/2007	21:34 PM	Thunderstorm Wind	50 kts.	0	0	0K	1K
151 TNZ006	01/29/2008	18:10 PM	High Wind	50 kts.	0	0	0K	0K
152 Oakwood	01/29/2008	18:22 PM	Thunderstorm Wind	55 kts.	0	0	20K	0K
153 TNZ006 - 058	01/29/2008	18:45 PM	High Wind	50 kts.	0	0	20K	0K
154 Clarksville	02/05/2008	21:43 PM	Thunderstorm Wind	70 kts.	0	0	100K	0K
155 Clarksville	04/10/2008	23:35 PM	Thunderstorm Wind	50 kts.	0	0	1K	0K
156 Clarksville	06/12/2008	13:10 PM	Thunderstorm Wind	50 kts.	0	0	0K	0K
157 Clarksville	07/07/2008	15:25 PM	Thunderstorm Wind	50 kts.	0	0	10K	0K
158 Clarksville	07/22/2008	09:00 AM	Thunderstorm Wind	50 kts.	0	0	1K	0K
159 Clarksville	05/09/2009	00:30 AM	Thunderstorm Wind	60 kts.	0	0	100K	0K
160 Round Pond	05/09/2009	00:35 AM	Thunderstorm Wind	69 kts.	0	0	150K	0K
				TOTALS:	0	5	2.195M	82K

Appendix 8

Summary of changes from the plan update process

Cover Page:

1. Changed the plan name from Montgomery County/Clarksville, TN Hazard Mitigation Plan to: **Montgomery County (Including The City of Clarksville, and The Clarksville-Montgomery County School System) Multi-Jurisdictional Hazard Mitigation Plan.**

Unless otherwise specified a reference indicating a condition or event affecting the entire county including the City of Clarksville and the Clarksville-Montgomery County School System, might be indicated only by "the county" or "Montgomery County".

2. The cover page graphic was also updated

Foreword:

Updated to include the Clarksville-Montgomery County School System and the change to a Multi-Jurisdictional Plan.

Section I

Introduction:

1. The Clarksville-Montgomery County School System was included as a local government as defined by 44CFR Part 201. 2

2. An explanation of how the Clarksville-Montgomery County School System became involved in the planning process.

The Community:

1. The Clarksville-Montgomery County School System background information was provided by the school system for addition into the section.

2. Population data was updated with U.S. Census Bureau 2008 Estimates.

3. Residential and Business units were updated as of September 10, 2009 figures.

4. Information referencing the Hemlock Semiconductor plant was updated to show construction has started and future construction of support businesses in the region is expected.

Local Government:

1. Added the Clarksville-Montgomery County School System as a local government as defined by 44 CFR Part 201.2.

Infrastructure:

1. No changes were made in this sub-section.

Agriculture:

1. Updated the information in this sub-section with 2007 data from the USDA website.

Climate:

1. No changes were made in this sub-section.

Hazards:

1. Updated this sub-section with an explanation of why the hazards (drought and lightning) were not profiled in the update.

Partnerships:

1. This sub-section was changed to reflect the addition of representatives of The Clarksville-Montgomery County School System were a part of the planning process.

Resources:

1. School system policies were added into this sub-section.

Challenges/Obstacles/Limitations:

1. No changes were made in this sub-section.

New Benefits and Capabilities:

1. A paragraph explaining the benefit of three jurisdictions working together as one team. Also, includes information of the planning process regarding reading each section of the original combined plan, and review of the mitigation action and addition of new ones.

Section II

Hazard Mitigation Team:

1. The number of agencies represented on the team was changed to 15.
2. Information on when the last planning meeting occurred.

Planning team method of approach:

1. Information summary from the last meeting when the team members were able to meet face to face. The meeting also discussed briefly regarding the addition of the school system, how the school system is able to be classified as a local government, and how it took part in the plan update planning process. Updated the information to clarify the process used to review, analyze, and evaluate each section of the plan during the update process

Section III

RISK ASSESSMENT:

Flood Hazards from runoff:

1. NOAA, NWS Community Collaborative Rain, Hail and Snow Network (CoCoRaHS) Daily Precipitation Map for Montgomery County, May 9, 2009 was added

Probability and Frequency:

1. Updated flood event information
2. Added a narrative from NOAA for the May 29, 2009 flood event
3. Updated rainfall data from the water treatment facility

Exposure and Impact:

1. Verified the NFIP data and repetitive loss data

Consequences:

1. Added one sentence to reflect school closures due to road flooding

Loss Estimation:

1. Updated property values used in the estimates.

Mitigation Approaches:

1. No changes were made in this sub-section

Research and Data Collection:

1. No changes were made in this sub-section

Bibliography and References:

1. Updated with new reference information

FLOOD HAZARDS FROM INUNDATION DUE TO DAM FAILURE

Probability and Frequency:

1. No changes were made for this sub-section

Exposure and Impact:

1. No changes were made for this sub-section

Consequences:

1. No changes were made for this sub-section

Loss Estimation:

1. The economic impact and property loss figures were updated to reflect the population changes based on the U.S. Census Bureau's 2008 estimates

Mitigation Approaches:

1. No changes were made for this sub-section

Research and Data Collection:

1. No changes were made for this sub-section

Bibliography and References:

1. Updated with new reference information

SEVERE STORMS - TORNADO/ WIND STORMS/WINTER STORMS

Probability and Frequency:

1. The data on tornado and high wind events as well as damage information was updated through May 31, 2009. The data time frame was changed to reflect a 59 year period. Added a Enhanced Fujita Scale graphic

Exposure and Impact:

1. No changes were made for this sub-section

Consequences:

1. No changes were made for this sub-section

Loss Estimation:

1. Revised this sub-section with information from HAZUS to demonstrate the vulnerability to damage

Mitigation Approaches:

1. No changes were made for this sub-section

Research and Data Collection:

1. No changes were made for this sub-section

Bibliography and References:

1. Updated with new reference information

Winter Storms

Probability and Frequency:

1. The data on tornado and high wind events as well as damage information was updated through May 31, 2009.

Exposure and Impact:

1. Revised this sub-section to clarify the levels of exposure

Consequences:

1. No changes were made for this sub-section

Loss Estimation:

1. Revised this sub-section with information from HAZUS to demonstrate the vulnerability to damage

Mitigation Approaches:

1. No changes were made for this sub-section

Research and Data Collection:

1. No changes were made for this sub-section

Bibliography and References:

1. Updated with new reference information

Earthquake Hazards

Probability and Frequency:

1. No changes were made for this sub-section

Exposure and Impact:

1. No changes were made for this sub-section

Consequences:

1. Updated event information from USGS

Loss Estimation:

1. Updated real property figure with data from the 2009 Montgomery County property assessment summary. Revised this sub-section with information from HAZUS to demonstrate the vulnerability to damage

Mitigation Approaches:

1. No changes were made for this sub-section

Research and Data Collection:

1. No changes were made for this sub-section

Bibliography and References:

1. Updated with new reference information

LAND SUBSIDENCE (SINKHOLE) HAZARDS

Probability and Frequency:

1. Revised this sub-section to

Exposure and Impact:

1. Revised this sub-section to clarify the exposure of all jurisdictions

Consequences:

1. No changes were made for this sub-section

Loss Estimation:

1. Revised this sub-section with information from HAZUS to demonstrate the vulnerability to damage

Mitigation Approaches:

1. No changes were made for this sub-section

Research and Data Collection:

1. No changes were made for this sub-section

Bibliography and References:

1. No changes were made for this sub-section

HAZARDOUS MATERIALS

Probability and Frequency:

1. Updated statistics with data from US DOT

Exposure and Impact:

1. Updated toxic release information for Montgomery County with 2007 data from the EPA

Consequences:

1. No changes were made for this sub-section

Loss Estimation:

1. Revised this sub-section with information from HAZUS to demonstrate the vulnerability to damage

Mitigation Approaches:

1. No changes were made for this sub-section

Research and Data Collection:

1. No changes were made for this sub-section

Bibliography and References:

1. Updated with new reference information

Section IV

Capability Assessment:

1. No changes were made in the section

Section V

Goals, Objectives, and Strategies

Recap on Hazards:

1. Updated all hazard areas with information from the hazard sections
2. Added an additional information paragraph in the strategies sub-section explaining the review process used on the Objectives and Strategies for each hazard, and the implementation schedule changes.

A summary of changes was developed and added as Appendix 8 of the plan update

Objectives and Strategies

A status update of the original strategies was performed and each one is listed in Appendix 9 of the plan update.

Appendix 9 was added

Appendix 9

The mitigation strategies from the original plan have been reviewed and analyzed by the hazard mitigation team during the plan update process to determine the status.

Flooding

Reference 1 was implemented and ongoing

Statement of problem: Drainage structures are not being maintained properly; due to this lack of maintenance the structures frequently get clogged or even collapse in some cases. These structures are usually left up to the property owner to maintain but they lack the training and resources to do this. Improper maintenance contributes to flooding problems and also health issues related to stagnant water and the dangers of having a large body of water in a residential development.

Drainage structure maintenance in the county remains the responsibility of the land owner by county resolution at this time. Increased public education and site visits are performed by the storm water personnel to help with drainage issues. The city maintains many of the drainage structures as resources are available.

Reference 2 is completed

Statement of problem: Current, updated flood maps are needed for Montgomery County. The maps currently in use are over twenty years old and do not reflect the massive amount of development which the County and City have both seen. Updated maps would be extremely helpful in making land use decisions and developing land use regulations.

Flood Maps were updated

Reference 3 was Implemented and ongoing

Statement of problem: Use of sinkholes to drain developed areas may be overloading the underground drainage system thereby causing flooding and land subsidence

City and county codes departments along with the storm water department map sinkholes as they are made aware of them. Data bases are being developed and updated through this process. Developers and land owners are given alternate methods of water drainage during permitting and public education events.

Reference 4 Implemented and ongoing

Statement of problem: Multiple businesses close to the downtown Clarksville area suffer flooding problems during periods of heavy rainfall.

The water drainage system is being updated as funds are available. New businesses must be constructed at higher elevations to prevent flood damage.

Reference 5 was implemented and ongoing

Statement of problem: waste water pumping stations located in low-lying areas float during periods of extended rainfall causing system failure and the danger of waste water “floating” out of the system and causing a danger to the health of the surrounding neighborhoods and downstream areas.

New construction and older pump stations that are retrofitted are engineered to withstand the effects of a 100 year flood based on FEMA flood maps. The engineering and construction processes should minimize the waste water “floating” issue.

Reference 6 Implemented and ongoing

Statement of Problem: Structures in the floodplain must be built to NFIP requirements.

All new construction must be in accordance with NFIP standards

Reference 7 Removed

Statement of Problem: Residences at end of Elberta Drive and at Michaels Drive have constant flooding problems.

Severe Storm/Tornado

Reference 1 Removed

Statement of Problem: lack of storm shelters in the area

Reference 2 Implemented and ongoing

Statement of Problem: structures need to be built to meet applicable building codes including wind load requirements, strapping, etc

The County/City codes departments have adopted standards of construction based on local conditions and requirements for natural hazards.

Reference 3 Implemented and ongoing

Statement of Problem: Dead, overhanging, and otherwise dangerous trees located in the right-of-way fall into the roadways during severe weather causing road closures and driving hazards.

Both agencies have plans in place to address and mitigate the hazards on a continuous basis.

Winter Storms

Reference 1 Implemented and ongoing

Statement of Problem: During snow and ice removal operations salt-distribution trucks must return to their respective facility for reloading of salt. Both the City and County have one salt shed each where salt is stored. In some cases, trucks must drive 20 miles through hazardous conditions back to their loading facility. This is not a very efficient method and adds on to the time it takes to clear roads for safe passage.

The county highway department has constructed two satellite salt barns in the county and one more is in the next budget year.

Reference 2 Removed

Statement of Problem: Clarksville Department of Electricity has a back-up power plan for Gateway Medical Center but automation of the process is needed to ensure a continuous power supply.

Reference 3 Implemented and ongoing

Statement of Problem: Structures need to be built to meet applicable building codes that relate to snow loads for our area.

The County/City codes departments have adopted standards of construction based on local conditions and requirements for natural hazards.

Reference 4 Implemented and ongoing

Statement of Problem: Dead, overhanging, and otherwise dangerous trees located in the right-of-way fall into the roadways during severe weather causing road closures and driving hazards.

Both agencies have plans in place to address and mitigate the hazards on a continuous basis.

Earthquakes

Reference 1 Implemented and ongoing

Statement of Problem: Structures need to be built to meet applicable building codes that relate to seismic activity (i.e., anchor bolt placement, footing requirements)

The County/City codes departments have adopted standards of construction based on local conditions and requirements for natural hazards.

Land Subsidence (Sinkholes)

Reference 1 Implemented and ongoing

Statement of problem: Use of sinkholes to drain developed areas may be overloading the underground drainage system thereby causing flooding and land subsidence

The Montgomery County Storm Water department has developed a data base of known sinkholes, and has implemented a public education program as part of their efforts to mitigate the use sinkholes as trash and debris dumping sites, and limit the use of sinkholes as storm water disposal structures.

Reference 2 Removed

Statement of problem: Sudden formation of sinkholes under streets, subdivisions, houses, etc.

Reference 3 Implemented and ongoing

Statement of Problem: City has program in place to map sinkholes and currently has a sinkhole layer on their GIS mapping layer. Montgomery County does not currently have a mapping system. A map of these sinkholes would be very helpful during all phases of land development and the land use decision making process.

The Montgomery County Storm Water department has developed a data base of known sinkholes, and has implemented alternate methods for developers to use for storm water retention during construction projects. Montgomery County is supported by the Austin Peay State University GIS Center for related projects.

Hazardous Materials

Reference 1 Implemented and ongoing

Statement of Problem: structures need to be built to meet applicable building codes related to hazardous material storage and use

The County/City codes departments have adopted standards of construction based on local conditions and requirements for hazardous materials storage.

Reference 2 Implemented and ongoing

Statement of Problem: Need to maintain and update training and equipment for Clarksville Fire Rescue and Montgomery County Hazardous Materials Teams and recruit and prepare new members.

The Montgomery County EMA and Clarksville Fire/Rescue have a schedule in place to continue training and equipment acquisition for hazmat technicians, as well as preparing new personnel that are interested in becoming hazmat technicians to attain the hazmat technician certification.

Reference 3 Implemented and ongoing

Statement of Problem: There is a need for more public safety personnel to be trained to the Hazardous Materials Awareness Level to assist with initial response to hazardous material incidents.

All emergency services personnel as well as other public service personnel from all of the jurisdictions are trained to the awareness level for hazardous materials. Yearly refresher training is also conducted.

Reference Number 4 Implemented and ongoing

Statement of Problem: Dead, overhanging, and otherwise dangerous trees located in the right-of-way fall into the roadways during severe weather causing road closures and driving hazards.

Both agencies have plans in place to address and mitigate the hazards on a continuous basis.

All Hazards

Reference 1 Implemented and ongoing

Statement of problem: lack of public awareness about the impact of natural and man-made hazards on our community and the actions to take to protect their homes, their property, and their lives.

Reference Number 2 Implemented and ongoing

Statement of Problem: Need to continue the Hazard Mitigation Planning process which the construction of this Plan has begun

This strategy is continued through the plan maintenance and update process

Reference number 3 planning team is in place - ongoing

Statement of Problem: While the City of Clarksville has several sirens in place there are currently no warning sirens located in Montgomery County outside the limits of the City of Clarksville to provide those residents with warning of imminent manmade or natural hazards.

As part of the plan maintenance and update process along with the inclusion of the Clarksville Montgomery County School System as a member of this multi-jurisdictional plan, other options and avenues for funding are being considered for meeting this strategy.

Reference Number 4 Implemented and ongoing

Statement of Problem: While HAZUS-MH is currently being utilized by Montgomery County in planning for hazards, it is not being utilized to its fullest potential. This software could conceivably be used in land use planning in addition to its “normal” uses.

HAZUS-MH is used to some extent, but is not the only means for data acquisition. The new version of HAZUS-MH will be installed when new computers that have the capacity to operate it are purchased. Training opportunities will pursued for new personnel after the new systems are in place.

RESOLUTION OF THE MONTGOMERY COUNTY
BOARD OF COMMISSIONERS APPROVING
AMENDMENTS TO THE 2009-10
SCHOOL BUDGET

WHEREAS, the proposed amendments to the General Purpose School Fund, Federal Projects Fund, Child Nutrition Fund, Transportation Fund, and Extended School Programs Fund Budgets reflect the most recent estimates of revenues and expenditures, and,

WHEREAS, the Clarksville-Montgomery Board of Education has studied the attached amendments and approved them on May 11, 2010, for recommendation to the Montgomery County Board of Commissioners.

NOW, THEREFORE, BE IT RESOLVED by the Montgomery County Board of County Commissioners assembled in Regular Business Session on this 14th day of June, 2010, that the 2009-10 School Budget be amended as per the attached schedules.

Sponsor Michael Harris

Commissioner _____

Approved _____
County Mayor

Attested _____
County Clerk

Clarksville-Montgomery County School System
General Purpose School Fund Budget

		2009-10 Budget As of 03/08/10	Proposed Increase (Decrease)	Amended Budget	
Estimated Revenues					
Local Revenues					
40110	Current Property Tax	25,081,396	-	25,081,396	
40120	Trustees Collection - Prior Years	765,000	-	765,000	
40140	Interest & Penalties	142,837	32,704	175,541	Based on current projected collections
40162	Payments In Lieu of Taxes (Utility)	669,523	-	669,523	
40210	Local Option Sales Tax	33,058,094	-	33,058,094	
40240	Wheel Tax	3,882,000	(309,700)	3,572,300	Based on current projected collections
40270	Business Tax	450,000	-	450,000	
40320	Bank Excise Tax	95,000	36,000	131,000	Based on current projected collections
40350	Interstate Telecommunications Tax	20,400	(6,400)	14,000	Based on current projected collections
43365	Archives & Records Management Fee	-	6,300	6,300	Based on current projected collections
43511	Tuition - Regular Day Students	15,000	-	15,000	
43583	Criminal Background Fee	22,000	-	22,000	
44110	Interest Earned	35,000	-	35,000	
44120	Lease/Rentals	35,000	80,000	115,000	Based on current projected collections
44130	Sale of Materials & Supplies	25,000	(13,000)	12,000	Based on current projected collections
44145	Sale of Recycled Materials	1,000	-	1,000	
44146	E-Rate Funding	-	10,000	10,000	Previously recorded as miscellaneous
44170	Misc. Refund - Other	148,500	(110,428)	38,072	Reduction in E-Rate refunds
44530	Sale of Equipment	100,000	-	100,000	
44560	Damages from Individuals	500	-	500	
44570	Contributions & Gifts	40,000	-	40,000	
	Total Local Revenues	**64,586,250**	**(274,524)**	**64,311,726**	
State Revenues					
46390	Transition School To Work	45,375	-	45,375	
46511	Basic Education Program	100,549,100	583,520	101,132,620	Based on current year student growth
46512	Basic Education Program - Stimulus	5,075,400	-	5,075,400	
46515	Early Childhood Education	1,772,695	-	1,772,695	
46590	Other State Education Funds	54,465	(24,465)	30,000	Based on state allocation
46592	Internet Connectivity	81,835	-	81,835	
46610	Career Ladder Program	925,000	(85,000)	840,000	Based on personnel meeting criteria
46820	Income Tax	163,000	16,624	179,624	Based on current projected collections
46850	Mixed Drink Tax	205,000	91,000	296,000	Based on current projected collections
	Total State Revenues	**108,871,870**	**581,679**	**109,453,549**	
Federal Revenues					
47630	Public Law 874 (Impact Aid)	4,120,000	(340,000)	3,780,000	Based on delay in federal processing
47640	JROTC	400,000	-	400,000	
48140	Adult Literacy	29,535	(4,535)	25,000	Based on state allocation
	Total Federal Revenues	**4,549,535**	**(344,535)**	**4,205,000**	
Non-Revenue Sources					
49700	Insurance Recovery	50,000	(25,000)	25,000	Based on year-to-date recovery
49800	Operating Transfers	917,000	-	917,000	
	Total Non-Revenue Sources	**967,000**	**(25,000)**	**942,000**	

Clarksville-Montgomery County School System
General Purpose School Fund Budget

	2009-10 Budget As of 03/08/10	Proposed Increase (Decrease)	Amended Budget
Total Revenues	**178,974,655**	**(62,380)**	**178,912,275**
Beginning Reserves and Fund Balance			
Reserve for On-The-Job Injury	1,375,218	-	1,375,218
Reserve for Property & Liability Insurance	1,475,000	-	1,475,000
Reserve for Extended Contract	458,448	-	458,448
Reserve for Career Ladder	33,381	-	33,381
Total Reserves	**3,342,047**	**-**	**3,342,047**
Beginning Fund Balance	**16,164,870**	**-**	**16,164,870**
Total Reserves and Fund Balance	**19,506,917**	**-**	**19,506,917**
Total Available Funds	**198,481,572**	**(62,380)**	**198,419,192**

Clarksville-Montgomery County School System
General Purpose School Fund Budget

	2009-10 Budget As of 03/08/10	Proposed Increase (Decrease)	Amended Budget	
Expenditures (Appropriations)				
71100 - Regular Instruction				
Salaries	68,878,621	(76,769)	68,801,852	Based on degree/exper./postions used
Employee Benefits	20,426,156	-	20,426,156	
Contracted Services	2,003,820	-	2,003,820	
Supplies and Materials	2,880,397	-	2,880,397	
Other Charges	375,120	-	375,120	
Equipment	25,000	1,789	26,789	Reallocation from 72210
Total 71100 - Regular Instruction	**94,589,114**	**(74,980)**	**94,514,134**	
71150 - Alternative School				
Salaries	619,601	2,885	622,486	Based on degree/exper./postions used
Employee Benefits	152,812	79	152,891	Based on year-to-date expenditures
Contracted Services	31,000	-	31,000	
Supplies and Materials	3,000	-	3,000	
Total 71150 - Alternative School	**806,413**	**2,964**	**809,377**	
71200 - Special Education				
Salaries	11,706,309	4,905	11,711,214	Based on degree/exper./postions used
Employee Benefits	3,858,342	-	3,858,342	
Contracted Services	1,141,679	-	1,141,679	
Supplies and Materials	119,000	-	119,000	
Equipment	15,000	-	15,000	
Total 71200 - Special Education	**16,840,330**	**4,905**	**16,845,235**	
71300 - Vocational Education				
Salaries	3,516,880	-	3,516,880	
Employee Benefits	1,087,127	-	1,087,127	
Contracted Services	87,000	-	87,000	
Supplies and Materials	289,797	(5,440)	284,357	Reallocation to equipment
Equipment	17,503	5,440	22,943	Reallocation from supplies
Total 71300 - Vocational Education	**4,998,307**	**-**	**4,998,307**	
72110 - Student Services				
Salaries	504,491	23,709	528,200	Based on degree/exper./postions used
Employee Benefits	152,064	2,928	154,992	Based on year-to-date expenditures
Contracted Services	7,350	-	7,350	
Supplies and Materials	3,860	-	3,860	
Other Charges	10,400	-	10,400	
Total 72110 - Student Services	**678,165**	**26,637**	**704,802**	
72120 - Health Services				
Salaries	751,300	5,000	756,300	Based on degree/experience used
Employee Benefits	298,604	17,000	315,604	Based on year-to-date expenditures
Contracted Services	22,000	(21,000)	1,000	Contract for nurse substitutes eliminated
Supplies and Materials	17,745	-	17,745	
Equipment	13,000	-	13,000	
Total 72120 - Health Services	**1,102,649**	**1,000**	**1,103,649**	

Clarksville-Montgomery County School System
General Purpose School Fund Budget

	2009-10 Budget As of 03/08/10	Proposed Increase (Decrease)	Amended Budget	
72130 - Other Student Support				
Salaries	6,033,964	(2,100)	6,031,864	Based on degree/exper./postions used
Employee Benefits	1,563,068	-	1,563,068	
Contracted Services	140,000	549	140,549	Based on year-to-date expenditures
Supplies and Materials	3,000	-	3,000	
Total 72130 - Other Student Support	**7,740,032**	**(1,551)**	**7,738,481**	
72210 - Regular Instruction Support				
Salaries	5,189,234	104,556	5,293,790	Based on degree/exper./postions used
Employee Benefits	1,501,599	8,046	1,509,645	Based on year-to-date expenditures
Contracted Services	64,090	(1,789)	62,301	Reallocation to 71100
Supplies and Materials	768,642	-	768,642	
Other Charges	422,828	-	422,828	
Total 72210 - Regular Instruction Support	**7,946,393**	**110,813**	**8,057,206**	
72215 - Alternative School Support				
Salaries	18,702	-	18,702	
Employee Benefits	15,590	-	15,590	
Total 72215 - Alternative School Support	**34,292**	**-**	**34,292**	
72220 - Special Education Support				
Salaries	966,351	65,515	1,031,866	Based on degree/exper./postions used
Employee Benefits	298,897	5,319	304,216	Based on year-to-date expenditures
Contracted Services	15,250	8,000	23,250	Based on year-to-date expenses
Supplies and Materials	64,750	200	64,950	Transition expenditures funded by grant
Other Charges	18,354	-	18,354	
Total 72220 - Special Education Support	**1,363,602**	**79,034**	**1,442,636**	
72230 - Vocational Education Support				
Salaries	95,289	-	95,289	
Employee Benefits	65,156	-	65,156	
Contracted Services	900	-	900	
Supplies and Materials	1,300	-	1,300	
Other Charges	1,500	-	1,500	
Total 72230 - Vocational Education Suppo	**164,145**	**-**	**164,145**	
72260 - Adult Education Support				
Salaries	62,986	-	62,986	
Employee Benefits	11,367	-	11,367	
Total 72260 - Adult Education Support	**74,353**	**-**	**74,353**	
72310 - Board of Education				
Salaries	60,251	39	60,290	Based on degree/exper./postions used
Employee Benefits	13,012	-	13,012	
Contracted Services	121,000	-	121,000	
Other Charges	65,000	-	65,000	
Total 72310 - Board of Education	**259,263**	**39**	**259,302**	

Clarksville-Montgomery County School System
General Purpose School Fund Budget

	2009-10 Budget As of 03/08/10	Proposed Increase (Decrease)	Amended Budget	
72320 - Director of Schools				
Salaries	216,824	293	217,117	Based on degree/exper./postions used
Employee Benefits	61,066	-	61,066	
Contracted Services	66,700	-	66,700	
Supplies and Materials	6,000	-	6,000	
Other Charges	15,000	-	15,000	
Total 72320 - Director of Schools	**365,590**	**293**	**365,883**	
72320 - Printing and Communications				
Salaries	324,154	11,833	335,987	Based on temporary needs
Employee Benefits	117,984	3,269	121,253	Based on year-to-date expenditures
Contracted Services	84,400	-	84,400	
Supplies and Materials	57,366	-	57,366	
Other Charges	13,000	-	13,000	
Equipment	10,000	-	10,000	
Total 72320 - Printing and Communication	**606,904**	**15,102**	**622,006**	
72410 - Office of the Principal				
Salaries	10,473,393	4,506	10,477,899	Based on degree/exper./postions used
Employee Benefits	3,398,342	-	3,398,342	
Contracted Services	56,927	-	56,927	
Other Charges	35,000	-	35,000	
Equipment	10,000	-	10,000	
Total 72410 - Office of the Principal	**13,973,662**	**4,506**	**13,978,168**	
72510 - Business Affairs				
Salaries	1,431,671	2,869	1,434,540	Based on degree/exper./postions used
Employee Benefits	520,429	520	520,949	Based on year-to-date expenditures
Contracted Services	129,975	-	129,975	
Supplies and Materials	43,000	-	43,000	
Other Charges	502,500	(7,000)	495,500	Staff development requirements
Insurance Premiums	1,233	-	1,233	
Trustee's Commission	1,108,341	38,101	1,146,442	Based on current anticipated revenue
Total 72510 - Business Affairs	**3,737,149**	**34,490**	**3,771,639**	
72520 - Human Resources				
Salaries	1,026,056	9,924	1,035,980	Based on degree/exper./postions used
Employee Benefits	1,056,881	30,000	1,086,881	Based on year-to-date expenditures
Contracted Services	107,355	-	107,355	
Supplies and Materials	112,700	-	112,700	
Other Charges	138,832	-	138,832	
Equipment	1,000	-	1,000	
Insurance Premiums	200,000	-	200,000	
Total 72520 - Human Resources	**2,642,824**	**39,924**	**2,682,748**	

Clarksville-Montgomery County School System
General Purpose School Fund Budget

	2009-10 Budget As of 03/08/10	Proposed Increase (Decrease)	Amended Budget	
72610 - Operation of Plant				
Salaries	4,568,609	1,019	4,569,628	Based on degree/exper./postions used
Employee Benefits	2,210,469	-	2,210,469	
Contracted Services	441,848	-	441,848	
Supplies and Materials	425,107	12,000	437,107	Based on year-to-date expenditures
Other Charges	6,200	-	6,200	
Equipment	228,795	-	228,795	
Utilities	7,416,346	(765,166)	6,651,180	Based on year-to-date expenditures
Insurance Premiums	731,311	-	731,311	
Total 72610 - Operation of Plant	**16,028,685**	**(752,147)**	**15,276,538**	
72620 - Maintenance of Plant				
Salaries	2,299,131	-	2,299,131	
Employee Benefits	962,753	-	962,753	
Contracted Services	470,210	-	470,210	
Supplies and Materials	1,105,946	-	1,105,946	
Other Charges	5,897	-	5,897	
Equipment	189,700	-	189,700	
Insurance Premiums	14,776	-	14,776	
Total 72620 - Maintenance of Plant	**5,048,413**	**-**	**5,048,413**	
72810 - Information Technology				
Salaries	2,102,582	16,947	2,119,529	Based on degree/exper./postions used
Employee Benefits	690,153	-	690,153	
Contracted Services	2,475,213	-	2,475,213	
Supplies and Materials	980,832	-	980,832	
Other Charges	50,984	-	50,984	
Equipment	3,092,025	-	3,092,025	
Total 72810 - Information Technology	**9,391,789**	**16,947**	**9,408,736**	
73400 - Early Childhood Education				
Salaries	1,264,596	618	1,265,214	Based on degree/exper./postions used
Employee Benefits	461,981	-	461,981	
Contracted Services	63,491	-	63,491	
Supplies and Materials	44,000	-	44,000	
Other Charges	24,857	-	24,857	
Equipment	39,000	-	39,000	
Total 73400 - Early Childhood Education	**1,897,925**	**618**	**1,898,543**	
99100 - Interfund Transfers				
	1,260,435	-	1,260,435	
Total 99100 - Interfund Transfers	**1,260,435**	**-**	**1,260,435**	

Clarksville-Montgomery County School System
General Purpose School Fund Budget

	2009-10 Budget As of 03/08/10	Proposed Increase (Decrease)	Amended Budget	
Total Expenditures	**191,550,434**	**(491,406)**	**191,059,028**	
Ending Reserves and Fund Balance				
Fund Balance	4,059,809	742,184	4,801,993	Projected fund balance as of 6/30/10
On-The-Job Injury Reserve	1,375,218	-	1,375,218	
Property & Liability Insurance Reserve	1,475,000	(300,000)	1,175,000	Projected reserve as of 6/30/10
Extended Contract Reserve	675	-	675	
Career Ladder Reserve	20,436	(13,158)	7,278	Projected reserve as of 6/30/10
Total Reserves and Fund Balance	6,931,138	429,026	7,360,164	
Total Expenditures, Reserves and Fund Balance	**198,481,572**	**(62,380)**	**198,419,192**	

Clarksville-Montgomery County School System
Federal Projects Fund Budget

		2009-2010 Budget As of 03/08/10	Proposed Increase (Decrease)	Amended Budget	
Estimated Revenues					
State Revenues					
46590	Adult Ed, LEAP	328,670	-	328,670	
46591	Coordinated School Health	105,000	-	105,000	
46981	Safe Schools Act	76,200	-	76,200	
	Total State Revenues	**509,870**	**-**	**509,870**	
Federal Revenues					
47120	Adult Basic Education	173,226	-	173,226	
47131	Career Technical Education	385,030	9,135	394,165	Based on actual Federal allocations
47141	Title I	8,825,299	-	8,825,299	
47143	Individuals w/ Disabilities Educ. Act (IDEA)	11,883,876	2,663	11,886,539	Based on actual Federal allocations
47145	Preschool (IDEA)	226,714	-	226,714	
47146	English Language Acquisition (Title III)	192,994	-	192,994	
47147	Safe & Drug-Free Schools (Title IV, CCLC)	900,820	-	900,820	
47149	Homeless (Title X)	4,460	-	4,460	
47189	Title II-A	1,099,461	-	1,099,461	
47590	Title II-D	230,199	-	230,199	
47990	Other Direct Federal	838,329	-	838,329	
	Total Federal Revenues	**24,760,408**	**11,798**	**24,772,206**	
Non-Revenue Sources					
49800	Operating Transfers	750,000	-	750,000	
	Total Non-Revenue Sources	**750,000**	**-**	**750,000**	
	Total Revenues	**26,020,278**	**11,798**	**26,032,076**	
	Beginning Fund Balance	**314,793**	**-**	**314,793**	
Total Available Funds		**26,335,071**	**11,798**	**26,346,869**	

Clarksville-Montgomery County School System
Federal Projects Fund Budget

	2009-2010 Budget As of 03/08/10	Proposed Increase (Decrease)	Amended Budget	
Expenditures (Appropriations)				
71100 - Regular Instruction				
Salaries	4,760,962	(86,289)	4,674,673	Based on degree/exper./positions used
Employee Benefits	1,464,348	(12,265)	1,452,083	Based on year-to-date expenditures
Contracted Services	369,083	6,810	375,893	Reflects program requirements
Supplies and Materials	636,572	1,494	638,066	Reflects program requirements
Equipment	63,009	(16,800)	46,209	Reflects program requirements
Total 71100 - Regular Instruction	**7,293,974**	**(107,050)**	**7,186,924**	
71200 - Special Education				
Salaries	3,138,237	-	3,138,237	
Employee Benefits	1,264,354	-	1,264,354	
Supplies and Materials	204,154	-	204,154	
Equipment	125,000	-	125,000	
Total 71200 - Special Education	**4,731,745**	**-**	**4,731,745**	
71300 - Vocational Education				
Salaries	-	69	69	Based on degree/exper./positions used
Employee Benefits	-	10	10	Based on year-to-date expenditures
Supplies and Materials	55,542	(13,706)	41,836	Reflects program requirements
Other Charges	4,000	(190)	3,810	Reflects program requirements
Equipment	180,818	22	180,840	Reflects program requirements
Total 71300 - Vocational Education	**240,360**	**(13,795)**	**226,565**	
71600 - Adult Education				
Salaries	79,464	(700)	78,764	Based on degree/exper./positions used
Employee Benefits	6,274	700	6,974	Based on year-to-date expenditures
Supplies and Materials	12,000	-	12,000	
Total 71600 - Adult Education	**97,738**	**-**	**97,738**	
72130 - Other Student Support				
Salaries	219,368	-	219,368	
Employee Benefits	57,676	5,900	63,576	Based on year-to-date expenditures
Contracted Services	55,440	5,767	61,207	Reflects program requirements
Supplies and Materials	45,970	(2,725)	43,245	Reflects program requirements
Other Charges	71,050	17,481	88,531	Reflects program requirements
Total 72130 - Other Student Support	**449,504**	**26,423**	**475,927**	
72210 - Regular Instruction Support				
Salaries	1,108,756	146,864	1,255,620	Based on degree/exper./positions used
Employee Benefits	244,350	86,091	330,441	Based on year-to-date expenditures
Contracted Services	283,509	6,054	289,563	Reflects program requirements
Supplies and Materials	70,776	14,395	85,171	Reflects program requirements
Other Charges	2,643,946	(149,449)	2,494,497	Reflects program requirements
Equipment	92,316	1,871	94,187	Reflects program requirements
Total 72210 - Regular Instruction Support	**4,443,653**	**105,826**	**4,549,479**	

Clarksville-Montgomery County School System
Federal Projects Fund Budget

	2009-2010 Budget As of 03/08/10	Proposed Increase (Decrease)	Amended Budget	
72220 - Special Education Support				
Salaries	1,061,899	-	1,061,899	
Employee Benefits	340,872	-	340,872	
Contracted Services	12,500	-	12,500	
Supplies and Materials	388,750	-	388,750	
Other Charges	3,599,057	10,044	3,609,101	Reflects program requirements
Equipment	7,250	-	7,250	
Total 72220 - Special Education Support	**5,410,328**	**10,044**	**5,420,372**	
72230 - Vocation Education Support				
Contracted Services	1,000	241	1,241	Reflects program requirements
Other Charges	4,500	(435)	4,065	Reflects program requirements
Total 72230 - Vocation Education Support	**5,500**	**(194)**	**5,306**	
72260 - Adult Education Support				
Salaries	92,312	-	92,312	
Employee Benefits	34,450	-	34,450	
Supplies and Materials	3,000	-	3,000	
Other Charges	3,468	-	3,468	
Total 72260 - Adult Education Support	**133,230**	**-**	**133,230**	
72610 - Operation of Plant				
Contracted Services	14,000	-	14,000	
Equipment	123,452	(2,440)	121,012	Reflects program requirements
Total 72610 - Operation of Plant	**137,452**	**(2,440)**	**135,012**	
72710 - Transportation				
Salaries	1,236,882	-	1,236,882	
Employee Benefits	134,714	-	134,714	
Contracted Services	34,875	-	34,875	
Supplies and Materials	5,394	-	5,394	
Equipment	302,500	-	302,500	
Total 72710 - Transportation	**1,714,365**	**-**	**1,714,365**	
99100 - Interfund Transfers				
Indirect Cost	926,295	(7,016)	919,279	Decreased assessment for indirect costs
Total 99100 - Interfund Transfers	**926,295**	**(7,016)**	**919,279**	
Total Expenditures	**25,584,143**	**11,798**	**25,595,941**	
Ending Fund Balance	**750,928**	**-**	**750,928**	
Total Expenditures and Fund Balance	**26,335,071**	**11,798**	**26,346,869**	

Clarksville-Montgomery County School System
Child Nutrition Fund Budget

		2009-2010 Budget As of 03/08/10	Proposed Increase (Decrease)	Amended Budget	
Estimated Revenues					
Local Revenues					
43521	Lunch Payments - Children	2,738,250	-	2,738,250	
43522	Lunch Payments - Adults	188,594	-	188,594	
43523	Income from Breakfast	266,163	-	266,163	
43525	Ala Carte Sales	1,656,741	-	1,656,741	
43990	Contract Services	42,591	-	42,591	
44110	Interest Earned	24,823	-	24,823	
44130	Sale of Materials & Supplies	110,000	-	110,000	
44170	Miscellaneous Refund	68,669	-	68,669	
	Total Local Revenues	**5,095,831**	**-**	**5,095,831**	
State Revenues - BEP					
46520	School Food Service	129,173	-	129,173	
	Total State Revenues	**129,173**	**-**	**129,173**	
Federal Revenues					
47111	Section 4 - Lunch Funds	4,524,947	-	4,524,947	
47113	Breakfast Reimbursement	1,303,774	-	1,303,774	
	Total Federal Revenues	**5,828,721**	**-**	**5,828,721**	
	Total Revenues	**11,053,725**	**-**	**11,053,725**	
	Beginning Fund Balance	**3,610,881**	**-**	**3,610,881**	
Total Available Funds		**14,664,606**	**-**	**14,664,606**	
Expenditures (Appropriations)					
73100 - Food Service					
	Salaries	4,135,512	20,803	4,156,315	Based on degree/experience used
	Employee Benefits	2,284,567	-	2,284,567	
	Contracted Services	388,552	-	388,552	
	Supplies and Materials	4,677,421	-	4,677,421	
	Utilities	244,500	-	244,500	
	Insurance Premiums	40,000	-	40,000	
	Other Charges	35,000	-	35,000	
	Equipment	550,000	-	550,000	
Total 73100 - Food Service		**12,355,552**	**20,803**	**12,376,355**	
	Total Expenditures	**12,355,552**	**20,803**	**12,376,355**	
	Ending Fund Balance	**2,309,054**	**(20,803)**	**2,288,251**	Projected Fund Balance as of 6/30/10
Total Expenditures and Fund Balance		**14,664,606**	**-**	**14,664,606**	

Clarksville-Montgomery County School System
Transportation Fund Budget

		2009-10 Budget As of 03/08/10	Proposed Increase (Decrease)	Amended Budget	
Estimated Revenues					
Local Revenues					
40110	Current Property Tax	1,673,984	-	1,673,984	
40120	Trustees Collection - Prior Years	45,000	-	45,000	
40140	Interest & Penalties	8,000	-	8,000	
40162	Payments In Lieu of Taxes (Utility)	44,685	-	44,685	
44145	Sale of Recycled Materials	1,000	-	1,000	
44170	Misc. Refund - Other	11,200	-	11,200	
44530	Sale of Equipment	40,500	-	40,500	
44560	Damages from Individuals	500	-	500	
Total Local Revenues		**1,824,869**	**-**	**1,824,869**	
State Revenues - BEP					
46511	Basic Education Program	8,078,000	-	8,078,000	
Total State Revenues - BEP		**8,078,000**	**-**	**8,078,000**	
Federal Revenues					
47143	Educ. of the Handicapped Act	1,282,915	-	1,282,915	
47590	Other Federal Through State	109,200	-	109,200	
Total Federal Revenues		**1,392,115**	**-**	**1,392,115**	
	Total Revenues	**11,294,984**	**-**	**11,294,984**	
	Beginning Fund Balance	**1,105,784**	**(349,655)**	**756,129**	Actual adjusted fund balance
Total Available Funds		**12,400,768**	**(349,655)**	**12,051,113**	
Expenditures (Appropriations)					
72510 - Fiscal Services					
	Trustee's Commission	36,000	4,000	40,000	Based on estimated revenues
Total 72510 - Fiscal Services		**36,000**	**4,000**	**40,000**	
72710 - Transportation					
	Salaries	5,769,436	143,484	5,912,920	Based on degree/experience used
	Employee Benefits	2,755,295	11,246	2,766,541	Based on year-to-date expenses
	Contracted Services	443,100	(19,725)	423,375	Based on year-to-date expenses
	Supplies and Materials	1,408,850	-	1,408,850	
	Other Charges	20,000	-	20,000	
	Equipment	633,738	-	633,738	
	Insurance Premiums	54,817	-	54,817	
Total 72710 - Transportation		**11,085,236**	**135,005**	**11,220,241**	
	Total Expenditures	**11,121,236**	**139,005**	**11,260,241**	
	Ending Fund Balance	**1,279,532**	**(488,660)**	**790,872**	Projected fund balance as of 6/30/10
Total Expenditures and Fund Balance		**12,400,768**	**(349,655)**	**12,051,113**	

Clarksville-Montgomery County School System
Extended School Program Fund

	2009-10 Budget As of 03/08/10	Proposed Increase (Decrease)	Amended Budget	
Estimated Revenues				
Local Revenues				
43513 Tuition - Summer School	165,000	-	165,000	
Total Local Revenues	**165,000**	**-**	**165,000**	
Total Revenues	**165,000**	**-**	**165,000**	
Beginning Fund Balance	**74,244**	**-**	**74,244**	
Total Available Funds	**239,244**	**-**	**239,244**	
Expenditures (Appropriations)				
71100 - Regular Instruction				
Salaries	116,000	38	116,038	Based on degree/experience used
Employee Benefits	17,238	-	17,238	
Contracted Services	14,000	-	14,000	
Supplies and Materials	5,000	-	5,000	
Total 71100 - Regular Instruction	**152,238**	**38**	**152,276**	
72410 - Office of the Principal				
Salaries	24,000	-	24,000	
Employee Benefits	3,377	-	3,377	
Total 72410 - Office of the Principal	**27,377**	**-**	**27,377**	
72510 - Business Affairs				
Trustee's Commission	1,500	-	1,500	
Total 72510 - Business Affairs	**1,500**	**-**	**1,500**	
72610 - Operation of Plant				
Salaries	8,000	-	8,000	
Employee Benefits	1,747	-	1,747	
Total 72610 - Operation of Plant	**9,747**	**-**	**9,747**	
Total Expenditures	**190,862**	**38**	**190,900**	
Ending Fund Balance	48,382	(38)	48,344	Projected fund balance as of 6/30/10
Total Expenditures and Fund Balance	**239,244**	**-**	**239,244**	

**RESOLUTION TO AMEND THE BUDGETS
OF VARIOUS FUNDS FOR FISCAL YEAR 2010
IN CERTAIN AREAS OF REVENUES AND EXPENDITURES**

WHEREAS, the director of Accounts and Budgets has performed continuing reviews of the status of funding needs and the receipts of revenues anticipated in support of the various budgets; and

WHEREAS, current year expenditures in certain accounts will permit decreases in budgetary appropriation for such accounts and these may be applied to the funding needs of other accounts; and

WHEREAS, contracts for various State grants were not received in time to be included in the annual budget appropriation process and are therefore included for appropriation in this resolution and detailed in the attached schedule.

NOW THEREFORE BE IT RESOLVED, by the Montgomery County Board of Commissioners, assembled in regular business session this 14th day of June 2010, that the budgets for various funds for FY10 be amended as to revenues and expenditures, according to the attached Account Schedule 1.

Duly passed and approved this 14th day of June, 2010.

Sponsor _____

Commissioner _____

Approved _____
County Mayor

Attested _____
County Clerk

SCHEDULE 1

Account	Department	Description	Current Budget	Amendment	Amended Budget	Description
101-00000-35130	Designated-Jail	Reserve		$ 151,781.93		Inmate medical designation
101-00000-39000	County General	Fund Balance		$ (32,292.21)		FY09 year-end accrual correction
101-54490-47235-08041	Homeland Security	Revenue	$ 730,399.45	$ 50,355.00	$ 780,754.45	Adjusted for FY10 beginning balances
101-53600-42660-P0055	Economic Crime Fund	Revenue	$ -	$ 20,500.00	$ 20,500.00	Should have been budgeted in FY10
101-53600-44170-P0055	Economic Crime Fund	Revenue	$ -	$ 4,000.00	$ 4,000.00	Unanticipated revenue
101-58804-47304	ARRA Grant-Court Security	Revenue	$ -	$ 939.20	$ 939.20	Grant Proceeds
101-00000-40220	Hotel/Motel Tax	Revenue	$ 1,200,000.00	$ 109,000.00	$ 1,309,000.00	Greater than anticipated Revenue
101-00000-46851	State Revenue Sharing-TVA	Revenue	$ 1,250,000.00	$ 131,430.00	$ 1,381,430.00	Greater than anticipated Revenue
101-CLARK-40162	Pmts in Lieu of Taxes-Utility	Revenue	$ 670,410.00	$ 161,821.56	$ 832,231.56	Greater than anticipated Revenue
101-FLRIM-40163	Pmts in Lieu of Taxes-Other	Revenue	$ 310,000.00	$ 114,012.79	$ 424,012.79	Greater than anticipated Revenue
101-QUBCR-40163	Pmts in Lieu of Taxes-Other	Revenue	$ -	$ 318,617.97	$ 318,617.97	Greater than anticipated Revenue
101-TRANE-40163	Pmts in Lieu of Taxes-Other	Revenue	$ -	$ 71,454.92	$ 71,454.92	Greater than anticipated Revenue
101-51600-45580	Register of Deeds	Revenue	$ 950,000.00	$ 64,395.90	$ 1,014,395.90	Register
101-51750-41520	Building & Codes	Revenue	$ 400,000.00	$ 269,413.98	$ 669,413.98	Building Permits
101-51750-41590	Building & Codes	Revenue	$ 80,000.00	$ 163,591.51	$ 243,591.51	Other Permits
101-51800-44120	County Buildings	Revenue	$ 459,000.00	$ 70,326.60	$ 529,326.60	Lease/Rentals
101-52500-45510	County Clerk	Revenue	$ 1,257,500.00	$ 72,711.96	$ 1,330,211.96	County Clerk
101-53910-44990	Adult Probation	Revenue	$ 550,000.00	$ 210,952.42	$ 760,952.42	Other Local Revenues
101-54210-44990	Jail	Revenue	$ 30,000.00	$ 20,248.08	$ 50,248.08	Other Local Revenues
101-54210-46915	Jail	Revenue	$ 564,000.00	$ 80,933.32	$ 644,933.32	Prisoner Boarding
101-54210-48110	Jail	Revenue	$ -	$ 20,458.50	$ 20,458.50	Prisoner Board
101-54220-46915	Workhouse	Revenue	$ 140,000.00	$ 56,902.24	$ 196,902.24	Prisoner Boarding
101-53600-53550	District Attorney	Other Contracted Services	$ 15,000.00	$ 15,000.00	$ 30,000.00	Increased need for witness travel
101-58804-54310	ARRA Grant-Court Security	Supplies & Materials	$ -	$ 939.20	$ 939.20	Grant offset
101-58400-55020	Other Charges	Other Charges	$ 423,766.00	$ (40,000.00)	$ 383,766.00	Offset increase of Attorney & Litigation
101-51400-53310	County Attorney	Other Contracted Services	$ 24,000.00	$ 30,000.00	$ 54,000.00	Increased need for services
101-51900-53320-P0039	Litigation	Other Contracted Services	$ 25,000.00	$ 10,000.00	$ 35,000.00	Misc Legal Expenses
101-54610-53400	County Coroner	Other Contracted Services	$ 170,000.00	$ 60,000.00	$ 230,000.00	Autopsies
101-52900-53320-P0038	Back Tax Attorney	Other Contracted Services	$ 37,000.00	$ 3,000.00	$ 40,000.00	Unforeseen Ad cost increase
101-55590-53410-P0033	Pauper Burial	Other Contracted Services	$ 11,000.00	$ 6,500.00	$ 17,500.00	Pauper Burials
101-54210-53400	Jail	Other Contracted Services	$ 1,262,656.00	$ 455,000.00	$ 1,717,656.00	Inmate medical
101-54490-53550-08041	Homeland Security	Other Contracted Services	$ 551.32	$ (551.32)	$ -	Adjusted for FY10 beginning balance
101-54490-57900-08041	Homeland Security	Capital Outlay	$ 423,647.00	$ (197,334.68)	$ 226,312.32	Adjusted for FY10 beginning balance
101-58110-53090-P0006	Tourism-City of Clarksville	Other Contracted Services	$ 233,000.00	$ 60,000.00	$ 293,000.00	Offset of increase hotel/motel tax
101-58110-53100-P0054	Tourist Commission	Other Contracted Services	$ 806,000.00	$ 49,000.00	$ 855,000.00	Offset of increase hotel/motel tax
101-53700-51690	Judicial Commissioners	Salaries	$ 44,925.89	$ 10,000.00	$ 54,925.89	Increase in PT hours due to FMLA and accrued leave
101-55130-51870	EMS	Salaries	$ 945,964.28	$ 280,000.00	$ 1,225,964.28	Additional OT due to FMLA/OJI/etc
101-55130-52010	EMS	Benefits	$ 242,451.50	$ 17,500.00	$ 259,951.50	Additional taxes/benefits due to OT
101-55130-52040	EMS	Benefits	$ 554,510.03	$ 40,000.00	$ 594,510.03	Additional taxes/benefits due to OT
101-55130-52120	EMS	Benefits	$ 56,702.36	$ 4,100.00	$ 60,802.36	Additional taxes/benefits due to OT
101-54120-51060-05153	Litter Enforcement	Salaries	$ 45,077.76	$ 550.00	$ 45,627.76	Correct amounts for FY10 year end accrual
101-54120-52040-05153	Litter Enforcement	Benefits	$ 6,464.15	$ 200.00	$ 6,664.15	Correct amounts for FY10 year end accrual

Total Increase in County General Fund Balance **$ 1,327,652.47**

SCHEDULE 1

Account	Department	Description	Current Budget	Amendment	Amended Budget	Description
131-61000-51010	Highway	Salaries	$ 90,558.01	$ 200.00	$ 90,758.01	Year end adjustments per Highway Dept
131-61000-51190	Highway	Salaries	$ 36,949.51	$ 200.00	$ 37,149.51	Year end adjustments per Highway Dept
131-61000-51610	Highway	Salaries	$ 31,480.07	$ 150.00	$ 31,630.07	Year end adjustments per Highway Dept
131-61000-51620	Highway	Salaries	$ 31,480.07	$ 150.00	$ 31,630.07	Year end adjustments per Highway Dept
131-61000-51870	Highway	Salaries	$ 1,120.00	$ 900.00	$ 2,020.00	Year end adjustments per Highway Dept
131-61000-52010	Highway	Benefits	$ 15,214.15	$ 600.00	$ 15,814.15	Year end adjustments per Highway Dept
131-61000-52040	Highway	Benefits	$ 35,042.99	$ 2,000.00	$ 37,042.99	Year end adjustments per Highway Dept
131-61000-52070	Highway	Benefits	$ 32,322.68	$ 3,000.00	$ 35,322.68	Year end adjustments per Highway Dept
131-61000-52120	Highway	Benefits	$ 3,557.98	$ 200.00	$ 3,757.98	Year end adjustments per Highway Dept
131-62000-51470	Highway	Salaries	$ 499,150.08	$ (7,400.00)	$ 491,750.08	Year end adjustments per Highway Dept
No Effect on Highway Fund Balance				**$ -**		
151-00000-49400	Debt Service		$ -	$ 74,155,000.00	$ 74,155,000.00	Increase revenue for bond refunding
151-00000-49410	Debt Service		$ -	$ 9,271,913.00	$ 9,271,913.00	Increase revenue for bond refunding
151-82110-56010	Debt Service		$ 4,133,539.00	$ (699,987.05)	$ 3,433,551.95	Reallocation of bond principal
151-82130-56010	Debt Service		$ 9,468,862.00	$ 699,987.50	$ 10,168,849.50	Reallocation of bond principal
151-82310-55100	Debt Service		$ 170,000.00	$ 15,000.00	$ 185,000.00	Increase in Trustee's fees
151-82310-56990	Debt Service		$ 725.00	$ 1,775.00	$ 2,500.00	Increase for registration fees
151-82330-56060-P0335	Debt Service		$ -	$ 42,000.00	$ 42,000.00	Reallocate interest expense
151-82330-55100	Debt Service		$ 330,000.00	$ 48,000.00	$ 378,000.00	Increase in Trustee's fees
151-82230-56030	Debt Service		$ 9,731,435.00	$ (106,775.00)	$ 9,624,660.00	Reallocate expenses
151-99300-56990	Debt Service		$ -	$ 82,922,779.39	$ 82,922,779.39	Payoff for refunding bonds
151-82310-56050	Debt Service		$ -	$ 396,729.25	$ 396,729.25	Increase for bond refunding expenses
151-82310-56060	Debt Service		$ -	$ 105,590.00	$ 105,590.00	Increase for bond refunding expenses
Total Increase in Debt Service Fund Balance				**$ 1,813.91**		

RESOLUTION AUTHORIZING GRANT OF TVA TRANSMISSION LINE EASEMENT

WHEREAS, a Grant of Transmission Line Easement between Montgomery County, Tennessee and the United States of America, namely, Tennessee Valley Authority (TVA), has been entered into subject to approval by the Montgomery County Board of Commissioners; and

WHEREAS, said easement encompasses an irregular parcel of land located 104.14 feet left of survey station 65+72.49 on the centerline of the Montgomery-Hemlock #1 Transmission Line Right-of-way; and

WHEREAS, said easement contains restrictions as set out in the Grant of Transmission Line Easement, a copy of which is attached hereto; and

WHEREAS, the sum of $4,150.00 has been agreed upon as the total purchase price for said property; and

WHEREAS, the Montgomery County Mayor, Carolyn Bowers, is hereby authorized and directed to execute and deliver a Grant of Transmission Line Easement, as attached hereto as Exhibit A, and all related documents to grant, sell, and convey to the United States of America a permanent easement and right-of-way as described in said grant and to receive payment therefor.

NOW THEREFORE BE IT RESOLVED, by the Montgomery County Board of Commissioners, assembled in regular business session this 14th day of June 2010, that Carolyn Bowers, County Mayor, be authorized and directed to execute and deliver the Grant of Transmission Line Easement as referenced above.

Duly passed and approved this 14th day of June, 2010.

Sponsor _____

Commissioner _____

Approved _____
County Mayor

Attested _____
County Clerk

EXHIBIT A

Prepared by and return to:

Andrea C. Kuban, Attorney
Tennessee Valley Authority
1101 Market Street, SP 3L
Chattanooga, Tennessee 37402-2801
1-888-817-5201

TVA Tract No. MHEM-1

GRANT OF TRANSMISSION LINE EASEMENT

FOR AND IN CONSIDERATION of the sum of FOUR THOUSAND ONE HUNDRED FIFTY AND NO/100 DOLLARS ($4,150.00), cash in hand paid, receipt whereof is hereby acknowledged, the undersigned,

MONTGOMERY COUNTY,
a political subdivision of the State of Tennessee,
("GRANTOR")

has this day bargained and sold, and by these presents does hereby grant, bargain, sell, transfer, and convey unto the UNITED STATES OF AMERICA a permanent easement and right-of-way for the following purposes, namely: the perpetual right to enter at any time and from time to time and to erect, maintain, repair, rebuild, operate, and patrol lines of transmission line structures with wires and cables for electric power circuits and communication circuits, and all necessary appurtenances, in, on, over, and across said right-of-way, together with the right to clear said right-of-way and keep the same clear of brush, trees, buildings, signboards, billboards, and fire hazards; to destroy or otherwise dispose of such trees and brush; and to remove, destroy, or otherwise dispose of any trees located beyond the limits of said right-of-way which in falling could come within five (5) feet of any transmission line structure or conductor; all over, upon, across, and under the land described in Exhibit A hereto attached and by this reference hereby incorporated in and made a part of this instrument as fully as if here written.

The previous and last conveyance of this property is deed of record in Volume 1217, page 2771, in the office of the Register of Montgomery County, Tennessee.

This easement is conveyed subject to existing easement rights owned by the United States of America.

TO HAVE AND TO HOLD the said easement and right-of-way to the UNITED STATES OF AMERICA and its assigns forever.

GRANTOR covenants with the said UNITED STATES OF AMERICA that it is lawfully seized and possessed of said real estate, has a good and lawful right to convey the easement rights hereinabove described, that said property is free of all encumbrances, and that it will forever warrant and defend the title thereto against the lawful claims of all persons whomsoever.

GRANTOR agrees that the payment of the purchase price above stated is accepted by it as full compensation for all damage caused by the exercise of any of the rights above described; except that the UNITED STATES OF AMERICA shall remain liable for any damage to annual growing crops and any direct physical damage caused to the property of the undersigned by its construction forces or by the construction forces of its agents and employees in the erection and maintenance of or in exercising a right of ingress and egress to said lines.

GRANTOR, for itself, and its successors and assigns, covenants with the UNITED STATES OF AMERICA that no buildings, signboards, or billboards, or fire hazards will be erected or maintained within the limits of the right-of-way, and agrees that this shall be a real covenant which shall attach to and run with the land affected by the easement rights and shall be binding upon everyone who may hereafter come into ownership of said land, whether by purchase, devise, descent, or succession.

IN WITNESS WHEREOF, GRANTOR has caused this instrument to be executed by its duly authorized County Mayor on this _____day of _____, 2010.

MONTGOMERY COUNTY, TENNESSEE

ATTEST:

By: _____ By: _____
CAROLYN P. BOWERS, County Mayor

Title _____

STATE OF TENNESSEE)
) SS
COUNTY OF MONTGOMERY)

Before me appeared CAROLYN P. BOWERS, to me personally known, who, being by me duly sworn, did say that she is the COUNTY MAYOR of MONTGOMERY COUNTY, TENNESSEE, and that said instrument was signed and delivered on behalf of said MONTGOMERY COUNTY, TENNESSEE, and that she, as such officer, acknowledged said instrument to be the free act and deed of said MONTGOMERY COUNTY, TENNESSEE, on the day and year therein mentioned.

WITNESS my hand and official seal this _____ day of _____, 2010.

_____
NOTARY PUBLIC

My Commission Expires:

_____

The name and address of the owner of the aforedescribed easement are:

EASEMENT OWNER:	United States of America **Tennessee Valley Authority** SP 3L 1101 Market Street Chattanooga, Tennessee 37402-2801 1-888-817-5201	[Tax Exempt - TCA §67-5-203(a)(1)]

The name and address of the legal owner are:

OWNER:	Montgomery County 1 Millennium Plaza Clarksville, Tennessee 37040	(See vol. 1217, page 2771)

Tax Map: 016
Parcel: 010.04

TVA Tract No. MHEM-1

EXHIBIT A

MONTGOMERY-HEMLOCK #1
TRANSMISSION LINE

Montgomery County

A permanent easement for transmission line(s) purposes on, over, and across a parcel of land located in the Second Civil District of Montgomery County, State of Tennessee, as shown on sheet P1 of US-TVA drawing LW-8712, revision 0, the said parcel being more particularly described as follows:

Commencing at a point which is a common corner in the lands of Owner Unknown, Highway 79, and others, the said point being on the south right-of-way line of the said road and being 129.35 feet left of the centerline of the transmission line location at survey station 59+47.00; thence leaving the said common corner and with the meanders of the said road right-of-way line and the north property line of Owner Unknown in a westerly direction 10.94 feet to a point on the west right-of-way line of the location, the said point being 140.00 feet left of the centerline of the location at survey station 59+44.50; thence leaving the said road right-of-way line and the said property line and with the said west right-of-way line of the location N00°14'50"E, 343.25 feet to a point on the east line of the herein described parcel, the said point being 137.50 feet left of the centerline of the location at survey station 63+04.99 and being the Point Of Beginning.

Thence leaving the point of beginning and the said east line and continuing with the said west right-of-way line of the location N06°51'39"W, 258.55 feet to a point on the property line between Montgomery County and Montgomery County Sheriffs Reserves, Inc., the said point being 137.50 feet left of the centerline of the location at survey station 65+63.54; thence leaving the said west right-of-way line of the location and with the said property line N68°07'21"E, 34.54 feet to a point on the aforementioned east line, the said point being 104.14 feet left of the centerline of the location at survey station 65+72.49; thence leaving the said property line and with the said east line S00°14'50"W, 269.57 feet to the point of beginning and containing 0.10 acre, more or less.

This description prepared from a survey by:
Barry E. Savage, RLS
Tennessee Valley Authority
1101 Market Street, MR 4B
Chattanooga, Tennessee 37402-2801
Tennessee License No. 1618

2/10/10
Checked: 2/17/10 MDM
Checked: 4/16/10 ACK

Tract No. MHEM-1

SUMMARY STATEMENT OF BASIS FOR OFFER

OWNER: MONTGOMERY COUNTY

ACQUISITION: Acres: 0.10±
Interest Acquired: Transmission Line Easement

LOCATION: An irregular parcel of land located 104.14 feet left of survey station 65+72.49 on the centerline of the Montgomery-Hemlock #1 Transmission Line Right-of-way.

ESTABLISHED JUST AND LIBERAL COMPENSATION: $4,150.00

BASIS: This compensation is based on the full amount of an appraisal prepared by experienced TVA staff appraisers who are trained in the techniques of appraising and who by reason of their investigations are thoroughly familiar with real property values in the project area. Their investigations include a comprehensive, continuing physical inspection of sales throughout the area as well as thorough studies of other factors affecting the value of real property. The appraisers made a detailed inspection of the tract to be acquired, considered the effect of its acquisition on any remaining property, and compared this property with similar properties in the area which have been sold in the open market.

REMARKS:

TENNESSEE VALLEY AUTHORITY

By Daisy A. Snipes

Daisy A. Snipes
Manager, Realty Services

OFFER MADE AND STATEMENT DELIVERED TO Montgomery County / Carolyn P. Bowers, Mayor

ON May 12, 2010 BY Gary Godfrey

TITLE Realty Representative

TVA 14027 [10-2007]

Tract No. MHEM-1
Land Cost
Short Code 0196253

SENSITIVE INFORMATION

CLOSING STATEMENT

Disposition of Purchase Price:

Total purchase price	$4,150.00
Less	$
Net amount to be disbursed on this transaction	$4,150.00

List of checks to be Issued:

Payee and Mailing Address	Amount	Check No.	Date Delivered
MONTGOMERY COUNTY 1 Millennium Plaza Clarksville, Tennessee 37040	$4,150.00		
	$		
Total Disbursements on this transaction	$4,150.00		

Prepared: _____ 4-16-2010 Approved: _____ 4/16/10
Paralegal *Date* *Reviewing Attorney* *Date*

Certificate of Sellers:

We, the undersigned, the sellers under the instrument of even date herewith certify that the amount of $4,150.00 is correct and that payment thereof has not heretofore been received; and we hereby acknowledge receipt of full settlement under said instrument in the manner above stated and authorize the disbursements above shown. We also approve the provisions of the agreement, if any, relating to the final disposition of the amount withheld for payment of taxes executed simultaneously with this certificate.

Signed this the _____ day of _____, 2010.

MONTGOMERY COUNTY

_____
Taxpayer Identification Number

By: _____
CAROLYN P. BOWERS, County Mayor

SENSITIVE INFORMATION

RESOLUTION TO LEVY A TAX RATE IN EXCESS OF THE CERTIFIED TAX RATE IN MONTGOMERY COUNTY, TENNESSEE, FOR THE FISCAL YEAR BEGINNING JULY 1, 2010

Be it resolved, by the Board of County Commissioners of Montgomery County, Tennessee, assembled in regular session on this day June 14, 2010 that:

Section 1. The combined property tax for Montgomery County, Tennessee, for the fiscal year beginning July 1, 2010 shall be at $2.88 for each $100 of taxable property within the County, which is to provide revenue for each of the following funds and otherwise conform to the following levies:

FUNDS	Actual 08-09 RATE	Actual 09-10 RATE	Actual 10-11 RATE
County General	$ .97	$ .93	$0.93
General Roads	.13	.12	.12
General Purpose Schools	1.02	.884	.884
Debt Service	.897	.84	.85
General Purpose Capital Projects	.055	.047	.037
Schools Capital Projects	.068	.059	.059
TOTAL TAX RATE	$ 3.14	$2.88	$2.88

Section 2. Total taxes due shall be rounded to the nearest $1.00 for each tax bill. Amounts from $0.50 to $0.99 will be rounded up, pursuant to TCA 67-5-102.

Section 3. All resolutions of the Board of County Commissioners of Montgomery County, Tennessee, which are in conflict with this resolution are hereby repealed.

Section 4. This resolution shall take effect from and after its passage, the public welfare requiring it. This resolution shall be spread upon the minutes of the Board of County Commissioners.

Duly passed and approved the 14th day of June 2010.

Sponsor _____

Commissioner _____

Approved _____
County Mayor

Attested_____
County Clerk

BUDGET RESOLUTION FOR THE FISCAL YEAR BEGINNING
JULY 1, 2010 AND ENDING JUNE 30, 2011 (FY11)
Schedule 1 - Appropriations

Account	Major Category Description	Appropriation
General Fund		
General Administration		
101-51100	County Commission	$ 207,248.00
101-51210	Board Of Equalization	$ 2,688.00
101-51220	Beer Board	$ 3,076.00
101-51240	Other Boards & Committees	$ 3,121.00
101-51300	County Mayor (Executive)	$ 438,408.00
101-51310	Human Resources	$ 326,992.00
101-51400	County Attorney	$ 24,000.00
101-51500	Election Commission	$ 623,767.00
101-51600	Register Of Deeds	$ 445,942.00
101-51720	Planning	$ 332,227.00
101-51730	Building and Projects	$ 144,327.00
101-51750	Codes Compliance	$ 613,828.00
101-51760	Geographical Info Sys	$ 114,896.00
101-51800	County Buildings	$ 937,657.00
101-51800-P0029	County Buildings - Public Safety Complex	$ 369,513.00
101-51810	Courts Complex	$ 1,156,489.00
101-51900-P0004	Public Information	$ 79,910.00
101-51900-P0039	Other General Admin - Litigation	$ 25,000.00
101-51900-P0041	Other General Admin - County Historian	$ 3,000.00
101-51900-P0178	Other General Admin - E-911 Communication Dist	$ 447,104.00
101-51910	Preservation Of Records	$ 120,261.00
	Total General Administration	$ 6,419,454.00
Finance		
101-52100	Accounts & Budgets	$ 743,362.00
101-52200	Purchasing	$ 279,272.00
101-52300	Property Assessor's Ofc	$ 1,047,499.00
101-52310	Reappraisal Program	$ -
101-52400	County Trustee's Office	$ 465,166.00
101-52500	County Clerk's Office	$ 1,702,060.00
101-52600	Information Systems	$ 1,345,236.00
101-52900-P0038	Other Finance - Back Tax Attorney	$ 50,550.00
	Total Finance	$ 5,633,145.00
Administration of Justice		
101-53100	Circuit Court	$ 1,878,996.00
101-53100-P0027	Circuit Court Judge	$ 8,100.00
101-53100-P0219	Circuit Court Jury	$ 97,601.00
101-53300	General Sessions Court	$ 1,679,191.00
101-53330-07010	Drug Court	$ 50,000.00
101-53400	Chancery Court	$ 483,277.00
101-53600	District Attorney Gen'l	$ 34,100.00
101-53600-P0055	District Attorney Gen'l - Bad Debt Fees	$ 24,700.00
101-53600-10040	District Attorney Gen'l - Safe Neighborhoods Grant	$ 81,183.00
101-53610	Public Defender	$ 23,625.00
101-53700	Judicial Commissioners	$ 245,834.00
101-53900-P0154	Other Admin Of Justice - Court Safety Program	$ 98,029.00
101-53900-05233	Other Admin Of Justice - Day Treatment Grant	$ 422,082.00
101-53910	Adult Probation Services	$ 842,861.00
	Total Administration of Justice	$ 5,969,579.00

BUDGET RESOLUTION FOR THE FISCAL YEAR BEGINNING
JULY 1, 2010 AND ENDING JUNE 30, 2011 (FY11)
Schedule 1 - Appropriations

Account	Major Category Description	Appropriation
Public Safety		
101-54110	Sheriff's Department	$ 7,071,008.00
101-54110-05028	Sheriff's Department - Salary Supplement	$ 46,800.00
101-54110-P0217	Sheriff's Department - Impound Lot	$ 10,539.00
101-54120-00076	Special Patrols - SRO	$ 1,038,202.00
101-54120-05016	Special Patrols - Stop Violence Against Women	$ 469,749.00
101-54120-05050	Special Patrols - Juvenile Delinquency Prevention	$ 80,707.00
101-54120-05153	Special Patrols - Litter Enforcement	$ 69,846.00
101-54120-09010	Special Patrols - Litter Abatement	$ 100,000.00
101-54130	Traffic Control	$ -
101-54160	Sexual Offender Registry	$ 16,841.00
101-54210	Jail	$ 11,418,077.00
101-54210-07030	Jail - Inmates	$ 64,000.00
101-54220	Workhouse	$ 1,586,247.00
101-54220-07030	Workhouse - Inmates	$ 13,000.00
101-54230-05156	Community Corrections	$ 468,789.00
101-54240-05253	Juvenile Services - Child Advocacy Center	$ 143,782.00
101-54240-05234	Juvenile Services - At Risk Grant	$ 70,929.00
101-54310	Fire Prevention & Control	$ 187,840.00
101-54410	Civil Defense - EMA	$ 390,458.00
101-54490	Homeland Security	$ 1,111,936.00
101-54610	Coroner / Med Examiner	$ 213,120.00
	Total Public Safety	$ 24,571,870.00
Public Health and Welfare		
101-55110	Local Health Center	$ 267,892.00
101-55120	Rabies & Animal Control	$ 467,072.00
101-55130	Ambulance Service	$ 6,747,526.00
101-55190-05225	Other Local Health Services - WIC Program	$ 2,076,400.00
101-55310	Regional Mental Health Ctr	$ 10,000.00
101-55390-P0035	Appropriation To State - Health Department	$ 33,912.00
101-55390-P0046	Appropriation To State - TN Rehabilitation Ctr	$ 180,783.00
101-55590	Other Local Welfare Svcs - Mental Examinations	$ 12,500.00
101-55590-P0031	Other Local Welfare Svcs - Child Welfare Services	$ 10,000.00
101-55590-P0033	Other Local Welfare Svcs - Pauper Burials	$ 16,825.00
101-55590-P0197	Other Local Welfare Svcs - Community Action Agcy	$ 75,000.00
101-55900-00044	Other Public Hlth & Welfare - Progressive Direction	$ 30,000.00
	Total Public Health and Welfare	$ 9,927,910.00
Social, Cultural, & Recreational Services		
101-56500	Libraries	$ 1,604,251.00
101-56700	Parks & Fair Boards	$ 307,837.00
101-56900-P0172	Other Socl, Cultural & Rec - Veterans Commission	$ 9,728.00
	Total Social, Cultural, & Recreational Services	$ 1,921,816.00
Agriculture & Natural Resources		
101-57100	Agricultural Extension	$ 362,420.00
101-57300	Forest Service	$ 2,000.00
101-57500	Soil Conservation	$ 52,945.00
	Total Agriculture & Natural Resources	$ 417,365.00
ARRA Grant		
101-58802	ARRA Grant - Drug Court	$ 50,000.00
101-58803	ARRA Grrant - Mobile Data	$ 129,156.00
	Total ARRA Grants	$ 179,156.00

BUDGET RESOLUTION FOR THE FISCAL YEAR BEGINNING
JULY 1, 2010 AND ENDING JUNE 30, 2011 (FY11)
Schedule 1 - Appropriations

Account	Major Category Description	Appropriation
Other General Government		
101-58110-P0006	Tourism - City of Clarksville	$ 237,600.00
101-58110-P0054	Tourism - Tourist Commission	$ 849,500.00
101-58120	Industrial Development	$ 624,616.00
101-58220	Airport	$ 272,156.00
101-58300	Veterans Services	$ 345,235.00
101-58400	Other Charges	$ 946,178.00
101-58400-P0128	Other Charges - Trustees Commission	$ 750,000.00
101-58500	Contribs To Other Agencies	$ 168,858.00
101-58600	Employee Benefits	$ 326,300.00
101-58900	Miscellaneous - Contingency Reserve	$ 22,025.00
101-64000	Litter & Trash Collection	$ 128,966.00
	Total Other General Government	$ 4,671,434.00
	Fund Total	$ 59,711,729.00
Drug Control Fund		
122-54110	Sheriff's Department	$ 52,115.00
	Fund Total	$ 52,115.00
General Roads Fund		
131-61000	Administration	$ 383,213.00
131-62000	Highway & Bridge Maint	$ 4,204,175.00
131-63100	Equipment Op & Maint	$ 1,103,084.00
131-63600	Traffic Control	$ 441,634.00
131-65000	Other Charges	$ 564,990.00
131-66000	Employee Benefits	$ 33,000.00
131-68000	Capital Outlay	$ 1,595,442.00
131-81200	Hwy & Street Debt Service	$ -
131-82220	Highways & Streets	$ 7,000.00
	Fund Total	$ 8,332,538.00

BUDGET RESOLUTION FOR THE FISCAL YEAR BEGINNING JULY 1, 2010 AND ENDING JUNE 30, 2011 (FY11)
Schedule 1 - Appropriations

Account	Major Category Description	Appropriation
CMCSS General Purpose Schools Fund		
141-71100-000	Regular Instruction	$ 97,786,830.00
141-71150-000	Alternative School	$ 843,056.00
141-71200-000	Special Education	$ 17,217,406.00
141-71300-000	Vocational Education	$ 5,060,988.00
141-72110-000	Attendance	$ 703,831.00
141-72120-000	Health Services	$ 1,160,891.00
141-72130-000	Other Student Support	$ 7,217,045.00
141-72210-000	Regular Instruction	$ 7,567,526.00
141-72215-000	Alternative School Support	$ 36,256.00
141-72220-000	Special Education	$ 1,647,824.00
141-72230-000	Vocational Education	$ 100,934.00
141-72260-000	Adult Programs	$ 76,381.00
141-72310-000	Board Of Education	$ 220,165.00
141-72320-000	Director of Schools	$ 372,003.00
141-72320-000	Communications	$ 511,586.00
141-72410-000	Ofc Of The Principal	$ 14,194,732.00
141-72510-000	Fiscal Services	$ 2,890,887.00
141-72510-000	Textbook Processing & Distribution	$ 479,648.00
141-72520-000	Human Resources	$ 2,560,492.00
141-72610-000	Operation Of Plant	$ 15,075,192.00
141-72620-000	Maintenance Of Plant	$ 4,812,352.00
141-72810-000	Technology Classroom Instruction	$ 4,232,409.00
141-72810-000	Technology - Administration	$ 2,687,932.00
141-73400-000	Early Childhood Education	$ 1,886,964.00
141-82230-000	Education Debt Service	$ 35,000.00
141-99100-000	Operating Transfers	
	Fund Total	$ 189,378,330.00
CMCSS Federal Projects Fund		
	See Provisions of Section 1 of the Resolution	
CMCSS Child Nutrition Fund		
143-73100-000	Food Service	$ 11,424,312.00
	Fund Total	$ 11,424,312.00
CMCSS Extended Schools Program Fund		
146-71100-000	Regular Instruction	$ 154,930.00
146-72410-000	Ofc Of The Principal	$ 28,008.00
146-72510-000	Fiscal Services	$ 1,000.00
146-72610-000	Operation Of Plant	$ 9,783.00
	Fund Total	$ 193,721.00

BUDGET RESOLUTION FOR THE FISCAL YEAR BEGINNING
JULY 1, 2010 AND ENDING JUNE 30, 2011 (FY11)
Schedule 1 - Appropriations

Account	Major Category Description	Appropriation
Debt Service Fund		
151-81100-000	General Govt Debt Service	$ -
151-81300-000	Education Debt Service	$ -
151-82110-000	Principal-Genl Govt	$ 5,141,743.00
151-82130-000	Prinicipal-Education	$ 12,442,648.00
151-82210-000	Interest-General Govt	$ 4,633,525.00
151-82230-000	Interest-Education	$ 9,436,258.00
151-82310-000	Other Debt Serv.-County Govt	$ 178,500.00
151-82330-000	Other Debt Serv.-Education	$ 458,500.00
	Fund Total	$ 32,291,174.00
Capital Projects Fund		
171	Trustees Commission	$ 30,000.00
171	Animal Control	$ 21,000.00
171	Building & Codes	$ 25,000.00
171	Information System	$ 342,024.00
171	Sheriff's Office	$ 453,500.00
171	Emergency Management	$ 30,000.00
171	Fire	$ 135,000.00
171	Ambulance . EMS	$ 333,666.00
171	Jail	$ 195,986.00
171	Parks & Recreation	$ 95,000.00
171	Other General Government Projects	$ 2,174,500.00
	Fund Total	$ 3,835,676.00
CMCSS Transportation Fund		
177-72510	Trustee's Commission	$ 40,000.00
177-72710	Student Transportation	$ 11,491,467.00
	Fund Total	$ 11,531,467.00
Risk Management (OJI) Fund		
266-51920-000	Risk Management	$ 527,563.00
	Fund Total	$ 527,563.00
CMCSS Captial Projects		
177-91300-000	Various Capital Projects	$ 2,500,000.00
	Fund Total	$ 2,500,000.00

- end of Schedule 1 -

A RESOLUTION MAKING APPROPRIATIONS FOR THE VARIOUS FUNDS, DEPARTMENTS, INSTITUTIONS, OFFICES, AND AGENCIES OF MONTGOMERY COUNTY, TENNESSEE, FOR THE FISCAL YEAR BEGINNING JULY 1, 2010 AND ENDING JUNE 30, 2011 (FY11) AND APPROVING THE FUNDING OF NON-PROFIT CHARITABLE ORGANIZATIONS IN ACCORDANCE WITH TCA §5-9-109

SECTION I. BE IT RESOLVED by the Board of County Commissioners of Montgomery County, Tennessee, assembled in business session on the 14th day of June, 2010 that the amounts hereafter set out are hereby appropriated for the purpose of meeting the expenses of the various funds, departments, institutions, offices, and agencies of Montgomery County, Tennessee, for capital outlay, and for meeting the payment of principal and interest on the County's debt maturing during the fiscal year beginning July 1, 2010 and ending June 30, 2011 according to **Schedule 1** of this resolution. The budget approved by the Clarksville-Montgomery County Board of Education for Federal Projects will be the approved Federal Project Fund Budget for budgetary purposes.

SECTION 2. BE IT FURTHER RESOLVED, that the appropriations herein made and expenditures authorized are predicated upon estimated fund balances as of July 1, 2010 and revenues expected to be realized during the fiscal year 2010-2011, schedules of which accompany this resolution and are made a part hereof by reference. If at any time during the fiscal year, it should appear that the availability of any fund will be less than the original estimate, it shall be the duty of the County Mayor, Director of Accounts and Budgets, and the Budget Committee to impound appropriations as required by Section 5-12-110(c) of Tennessee Code Annotated.

SECTION 3. BE IT FURTHER RESOLVED, that expenditures shall not be made from appropriations made by this resolution which cover capital outlays to be funded from the proceeds of borrowed money until this Board of County Commissioners has duly adopted and appropriated resolution authorizing the issuance of appropriate bonds or notes pursuant to applicable provisions of Tennessee Code Annotated.

SECTION 4. BE IT FURTHER RESOLVED, that there are also hereby appropriated certain commissions and fees for collecting taxes and licenses and for administering other funds

which the County Trustee, County Clerk, Sheriff, Register of Deeds, Circuit Court Clerk, and the Clerk and Master and their officially authorized deputies and assistants may severally be entitled to receive under state laws heretofore or hereinafter enacted. Expenditures out of commissions and/or fees collected by the County Trustee, County Clerk, Circuit Clerk, Clerk and Master, Sheriff, and the Register of Deeds may be made only as now expressly authorized by existing law or by valid order of any court having power to make such authorizations. Any such commissions and/or fees collected shall be paid over to the County Trustee for credit to the County General Fund as provided by law.

SECTION 5. BE IT FURTHER RESOLVED, that if the need shall arise,

1. The Transfer of expenditures levels within a categorical appropriation, as hereinabove reflected for the General Purpose School Fund, may be made by majority vote of the Board of Education meeting in regular or called sessions, but transfers between said categorical appropriations may be authorized only by the Board of County Commissioners. In all cases, the aforesaid authorizations shall be reduced to writing.

2. The Budget Committee may, with the consent of any officials, head of any department or division which may be affected, transfer any amount from any item of appropriation to any other item of appropriation within such department, division, or major functional activity. Be it further provided that such transfer shall be authorized in writing and signed by the County Mayor, the Budget Committee and the departmental or divisional head concerned. In all cases, the aforesaid authorizations shall be reduced to writing and one copy of any such authorization shall be filed with the County Clerk, one copy with the Chairman of the Budget Committee, one copy with the Director of Accounts and Budgets, and one with each departmental or divisional head concerned. Said authorizations shall clearly state the reasons for the transfers.

SECTION 6. BE IT FURTHER RESOLVED, that any appropriation made by this resolution which covers the same purpose for which a specific appropriation is made by statute is made in lieu of, but not in addition to, said statutory appropriation. The salary, wages, or remuneration of each officer, employee or agent of the County, shall not be in excess of the amounts authorized by existing law or as set forth in the estimate of expenditures which accompanies this resolution. But provisions for such salaries, wages, or other remuneration hereby authorized, shall in no case be constructed to permitting expenditures for any department, agency, or division of the County in excess of that appropriation herein made for such

department, division, or agency, and such appropriation shall constitute the limit for the expenditures and encumbrances of any department, division and agency during the fiscal year ending on June 30, 2011. The aggregate encumbrances and expenditures with respect to any item of appropriation shall in no instance be more than the amount herein appropriated for such item.

SECTION 7. BE IT FURTHER RESOLVED, that any resolution which may hereafter be presented to the Board of County Commissioners providing for appropriations in addition to those made by this Budget Appropriation Resolution shall specifically provide sufficient revenue or other funds, actually to be provided during the fiscal year in which the expenditure is to be made, to meet such additional appropriation. Said appropriating resolution shall be submitted to and approved by the State Director of Local Finance after its adoption as provided by Section 9-11-101 to 9-11-119, inclusive, of the Tennessee Code Annotated.

SECTION 8. BE IT FURTHER RESOLVED, that if the need shall arise, the County Mayor and Director of Accounts & Budgets are hereby authorized to borrow money on tax anticipation and/or revenue anticipation notes, provided such notes are first approved by the State Director of Local Finance, to pay for the expenses herein authorized until the taxes and other revenues for the fiscal year 2010-2011 have been collected, not exceeding 60% of the appropriations of each individual fund. The proceeds of loans for each individual fund shall be used only to pay the expenses and other requirements of the fund for which the loan is made and the loan shall be paid out of revenue of the fund for which money is borrowed. The notes evidencing the loans authorized under this section shall be issued under the authority of Title 9-Chapter 21, Tennessee Code Annotated. Said notes shall be signed by the County Mayor and countersigned by the County Clerk and shall mature and be paid in full without renewal no later than June 30, 2011.

SECTION 9. BE IT FURTHER RESOLVED, that the delinquent County property taxes for the year 2010 and prior years and interest and penalty thereon collected during the year ending June 30, 2011 shall be apportioned to the various County funds according to the subdivision of the tax levy for the year 2010. The Clerk & Master of Chancery Court and the County Trustee are hereby authorized and directed to make such apportionment accordingly.

SECTION 10. BE IT FURTHER RESOLVED, that all unencumbered balances of appropriations remaining on June 30, 2011 shall lapse, and be of no further force and effect. However, the unencumbered and unexpended balances of previously-appropriated capital projects funds will remain in force and effect without reappropriation until closed.

SECTION 11. BE IT FURTHER RESOLVED, that the County Budget Committee is hereby authorized and instructed to provide for the investment of any idle funds in the County General Fund, General Road Fund, General Purpose School Fund, Debt Service Fund, Capital Projects Funds, Bi-County Landfill, 19th Judicial District Drug Task Force and Unemployment Compensation Tax Fund, the specific type of investment to be made with a view to safety of principal, demand for liquidity, and the best return on such investment, and otherwise in the best judgment by the County Trustee to the County General Fund, the Unemployment Compensation Tax Fund, Bi-County Landfill, 19th Judicial District Drug Task Force, or Capital Projects Fund as may be appropriate, all pursuant to authority vested by law, including but not limited to Sections 5-8-301 to 5-8-302, Tennessee Code Annotated.

SECTION 12. BE IT FURTHER RESOLVED, that any resolution or part of a resolution, which has heretofore been passed by the Board of County Commissioners is in conflict with any provision in this resolution be and the same is hereby repealed.

SECTION 13. BE IT FURTHER RESOLVED, that the following special provisions apply to this budget:

1. That the property taxes levied in support of the Capital Projects Funds shall be used only to provide funding for projects and expenditures specifically approved by the County Commission, either in this resolution, the corresponding budget book, or by future resolution of the County Commission; and that any property tax levied that is not spent for such purposes will revert to the fund balance of that capital projects fund.
2. In the event that revenues are not collected to support the General Fund expenditures for the 2010-11 budget, any amount up to $2,000,000.00 may be transferred from the debt service fund.

SECTION 14. BE IT FURTHER RESOLVED, that if the fiscal year 2010-2011 budget of Montgomery County, Tennessee is not approved during the June, 2010 term of the Board of County Commissioners:

1. **A**mounts set out in the FY 2009-2010 Appropriation Resolution are continued, and its provisions will be in force, until a new FY 2010-11 Appropriation Resolution is adopted.

2. The property tax rate as adopted for FY 2009-2010 shall remain in effect for FY 2010-11 until a new property tax rate is adopted.

3. The County Mayor and County Clerk are hereby authorized to borrow money on tax anticipation notes, not exceeding 60% of the appropriations of each individual fund of the continuing budget, to pay for the expenses herein authorized until the taxes and other revenues for fiscal year 2010-2011 have been collected. Such notes shall first be approved by the State Director of Local Finance. The notes evidencing the loans authorized under this section shall be issued under the authority of Title 9, Chapter 21, *Tennessee Code Annotated*. All of said notes shall mature and be paid in full without renewal not later than June 30, 2011.

SECTION 15. BE IT FURTHER RESOLVED, that the County Government complies with Titles VI, VII, and IX of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1975, the Americans with Disabilities Act, and the Age Discrimination Act of 1975. No person shall be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination in the execution of this budget or in the employment practices of the County on the grounds of disability, age, race, color, religion, sex, national origin, or any other classification protected by Federal, Tennessee State constitutional, or statutory law.

SECTION 16. BE IT FURTHER RESOLVED, that the Board of County Commissioners, recognizing that the various non-profit charitable organizations located in Montgomery County have great need of funds to carry on their non-profit charitable work, hereby makes appropriations to non-profit charitable organizations as listed in **Schedule 2** of this resolution, in accordance with Section 5-9-109, inclusive, Tennessee Code Annotated, and that all appropriations enumerated in Schedule 2 are made subject to the following conditions:

1. That the non-profit charitable organizations to which funds are appropriated shall file with the County Clerk and the disbursing officials a copy of an annual report of its business affairs and transactions and the proposed use of the County's funds in accordance with rules promulgated by the Comptroller of the Treasury, Chapter 0380-2-7. Such annual report shall be prepared and certified by the chief financial officer of such nonprofit organization in accordance with Section 5-9-109(c), Tennessee Code Annotated.

2. That said funds must only be used by the named non-profit charitable organization in furtherance of their non-profit charitable purpose benefiting the general welfare of the residents of the County.

3. That it is the expressed interest of the Board of County Commissioners in providing these funds to the above named non-profit charitable organizations to be fully in compliance with Chapter 0380-2-7 of the Rules of the Comptroller of the Treasury, and Section 5-9-109, inclusive, Tennessee Code Annotated and any and all other laws which may apply to county appropriations to non-profit organizations, and so this appropriation is made subject to compliance with any and all of these laws and regulations.

SECTION 17. BE IT FURTHER RESOLVED, that this resolution shall take effect from and after its passage and its provisions shall be in force from and after July 1, 2010. This resolution shall be spread upon the minutes of the Montgomery County Board of Commissioners.

Duly passed and approved the **14th day of June 2010.**

Sponsor: _____

Commissioner:_____

Approved:_____

County Mayor

Attested: _____

County Clerk