Chester County
Hazard Mitigation Plan

2020 Update

Prepared By:

Chester County Hazard Mitigation Committee
Chester County Emergency Management Agency

Assistance Provided By:

Tennessee Emergency Management Agency
as part of the Tennessee Mitigation Initiative

Executive Summary

Over the past two decades, hazard mitigation has gained increased national attention due to the large number of natural disasters that have occurred throughout the U.S. and the rapid rise in costs associated with those disaster recoveries. It has become apparent that money spent mitigating potential impacts of a disaster event can result in substantial savings of life and property. With these benefit cost ratios being extremely advantageous, the Disaster Mitigation Act of 2000 was developed as U.S. Federal legislation that reinforces the importance of pre-disaster mitigation planning by calling for local governments to develop mitigation plans *(44 CFR 201)*.

The purpose of a local hazard mitigation plan is to identify the community's notable risks and specific vulnerabilities, and then to create/implement corresponding mitigation projects to address those areas of concern. This methodology helps reduce human, environmental, and economical costs from natural and man-made hazards through the creation of long-term mitigation initiatives.

The advantages of developing a local hazard mitigation plan are numerous including improved post-disaster decision making, education on mitigation approaches, an organizational method for prioritizing mitigation projects, etc. It has been noted that communities who successful complete and maintain a mitigation plan receive larger amounts of Federal and State funding to be used on mitigation projects, and receive these funds faster, than communities who do not have a plan. Such funding sources that the plan caters to are Pre-Disaster Mitigation, Flood Mitigation Assistance, Severe Repetitive Loss, and Hazard Mitigation Grant Programs.

The 2020 update of the Chester County Hazard Mitigation Plan was created to act as a well thought-out guide to be used by, and for, the people of Chester County. For this plan to be successful, each jurisdiction/district within the county participated in the drafting and preparation of the plan update. These participating jurisdictions/districts include:

- Chester County (Unincorporated)
- City of Henderson (County Seat)
- Town of Enville
- Town of Milledgeville
- Chester County School District

In reference to federal code title *44 CFR 201*, an updated hazard mitigation plan is required to be submitted to both TEMA (State) and FEMA (Federal) for review every five-years to be reapproved. When the plan is deemed "approval pending adoption" by FEMA *(44 CFR 201.6(c)5)*, each of the participating jurisdictions will adopt the plan through a local resolution.

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Section 1: Planning Process

Planning Process Update

The previous Chester County Hazard Mitigation Plan was approved by FEMA on August 13th, 2020. Per federal requirements stated in *44 CFR 201*, all local hazard mitigation plans are required to go through a FEMA update review every 5 years to remain eligible for hazard mitigation grants. This update methodology was developed to assure that local governments are continuing to re-evaluate their risks and to regularly implement mitigation projects that can reduce community vulnerabilities.

The beginning of the plan's five-year update process took place at a meeting on December 10th, 2019 *(See **Appendix 1** for the meeting's attendance sheet)*. At this meeting Chester County Emergency Management Agency stated that they would continue the role of leading staff and interested persons in updating their mitigation plan. The tasks to be undertaken by Chester County Emergency Management Agency consisted of continuing to get agencies and the public involved in the county's mitigation efforts, performing the written plan's required 5-year update, and soliciting for new mitigation actions/projects to be added to the plan.

Prior to this meeting Chester County began reorganizing the county-wide hazard mitigation committee. Realizing that a successful mitigation committee includes a number of representatives, specialists, and individuals who can give valuable/unique insights that local emergency management staff may not have considered; invites to be a part of this plan update included open invitation to elected officials, county and city staff, representatives of the jurisdictions, representatives of all school districts, neighboring counties, local businesses, state agencies, private organizations, academia, non-profits, and other noticeable persons. In addition to public advertisements, adjacent counties were invited to participate via announcements at the West Tennessee Regional Emergency Management Quarterly Director's Meetings. Despite notices to representatives from adjacent counties, none were present at either meeting. Additionally, there was no public attendance at the meetings.

The Chester County Hazard Mitigation Committee for the plan update consists of the following members:

Member	Title	Agency	Representation
Johny Farris (Committee Chairperson)	Director	Chester County Emergency Management Agency	Chester County
Jay Nance	District Coordinator	Tennessee Emergency Management Agency	Tennessee
Brent Phillips	Planner	Tennessee Emergency Management Agency	Tennessee
Dave Harwell	Chief	Chester County Fire	Chester County
John Malone	Foreman	Chester County Highway Department	Chester County
Leland Alexander	Chief	Milledgeville Fire Department	Milledgeville
Glenn Bryan	Chief	Henderson Fire Department	Henderson
Carter Scales	Director	Henderson Public Works	Henderson
Darryl Green	Director	Henderson Utilities	Henderson
Brent Beshires	Floodplain Manager, Building and Zoning Official	Henderson Building Department	Henderson
Tim Crowe	Assistant Chief	Henderson Police Department	Henderson
Dr. Steven Marise	Safety Coordinator	Chester County School District	Chester County School District
Cheryl Yarbro	District Coordinator	Tennessee Emergency Management Agency	Tennessee
Gary Davidson	Chief	Henderson Police Department	Henderson
Kaye Ritter	Alderman	Enville	Enville

The Chester County Hazard Mitigation Committee continues to be the county's lead in all mitigation efforts and in the development of the county's mitigation plan. The committee member's efforts in the plan update were broken down into five stages: **1)** analysis of the original plan *(the plan as it stood prior to the updates)*, **2)** updating of the plan, **3)** public participation, **4)** review of the final updated plan, and **5)** adoption of the plan.

Stage 1: During the analysis of the plan, Chester County Emergency Management Agency reviewed the original county plan and made notes on what sections would require the main updates. Chester County Emergency Management Agency suggested that the two core areas for needed updates were in the risk/vulnerability assessment and in the

restructuring of the county's listed hazard mitigation projects, as well as re-evaluating the plan's hazards, re-assessing their risks, re-calculating each jurisdiction's vulnerable areas, and re-establishing the county's mitigation goals.

Stage 2: From there the committee started making the updates to the plan. A large amount of this effort took place at the second Chester County Hazard Mitigation Committee meeting that was held on January 14th, 2020. Tasks included developing and prioritizing projects for the new plan and concluding any remaining business. TEMA personnel were present at this meeting to answer mitigation planning and grant questions. ***Appendix 2*** provides a copy of the meeting's attendance sheet.

One additional meeting was held with the Town of Enville on January 2nd, 2020. Crump officials were unable to attend the two collective meetings. All necessary items to include Crump in the plan were conducted at this meeting. ***Appendix 3*** provides a copy of the meeting's attendance sheet.

Stage 3: To encourage public involvement, the Chester County Hazard Mitigation Committee meetings were given public notice. ***Appendix 4*** presents a copy of the public notices.

Stage 4: Next the committee evaluated the written updates of the plan against FEMA's crosswalk requirements via email correspondence. This also included having the jurisdictions review the drafts that specifically addressed aspects of their jurisdiction before the plan is sent to FEMA for review.

Stage 5: Upon receiving the "Approval Pending Adoption" designation from FEMA's review, the public will be given a chance to comment on the final draft of the update plan prior to its adoption by each local jurisdiction. This opportunity will take place at a local board meeting for each jurisdiction before the updated plan adoption decision takes place. The opportunity for final public comment will therefore be documented through the receipt of a signed adoption resolution.

Review of Existing Information

A preliminary review of existing plans, reports, and information was conducted during the initial phase of creating the Chester County Hazard Mitigation Plan. The primary purpose of reviewing this information was to identifying local hazards, recognizing local risks, and understanding different local vulnerabilities. The following list of sources identifies some of the existing studies that were reviewed:

- State of Tennessee Hazard Mitigation Plan
- Tennessee Emergency Management Plan (TEMP)
- U.S. Census Bureau
- FEMA Mitigation "How to" Guides
- NOAA National Climatic Data Center (NCDC) storm reports
- Chester County BEOP
- Chester County Schools Emergency Plans
- Chester County Highway Department Plan
- County & Jurisdictional Fire Department 5 Year Plans
- Jurisdictional Plans, SOP's, & SOG's

These sources helped to develop the plan's hazard, risk, and vulnerability assessment sections that in return led to the establishment of meaningful mitigation actions.

Updates within the Plan

It is important to note that this countywide plan was a minor revision of the previous Chester County Hazard Mitigation Plan. Chester County reviewed and analyzed each section of the original plan and made updates in the following ways:

Section 1: Planning Process
Chester County updated the original plan's description of the planning process to include the new or no longer participating committee members, the most recent countywide mitigation meetings that took place for the plan's update, and the latest opportunity for the public to get involved. Chester County also compiled a new list of existing documents that they reviewed in updating their sections in the plan.

Section 2: County Profile
Chester County created a new development trends section in this plan update.

Section 3: Risk Assessment
Chester County kept all of their listed natural hazards from the original hazard mitigation plan. As part of the plan update, Chester County updated their previous occurrence hazard listings to cover all occurrences for flood and tornado events, the most recent twenty years for all other hazards. The committee then re-evaluated each hazard's extent, probability, and potential impacts.

Section 4: Mitigation Strategy

Chester County has brainstormed some new mitigation projects that were added to the list, used a new chart method to profile project details, and developed a system to describe where their previous plan's projects are in terms of being implemented. Projects were then prioritized based on specific criteria.

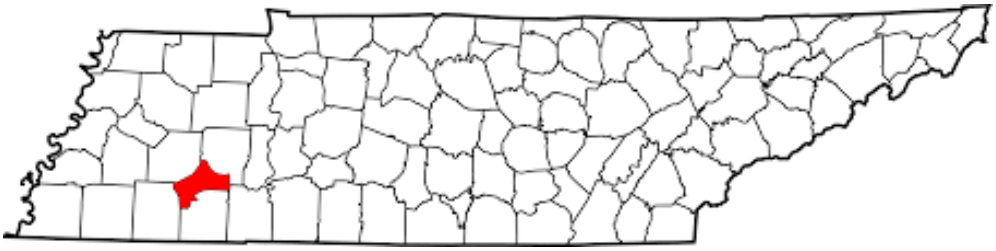
Section 5: Plan Maintenance

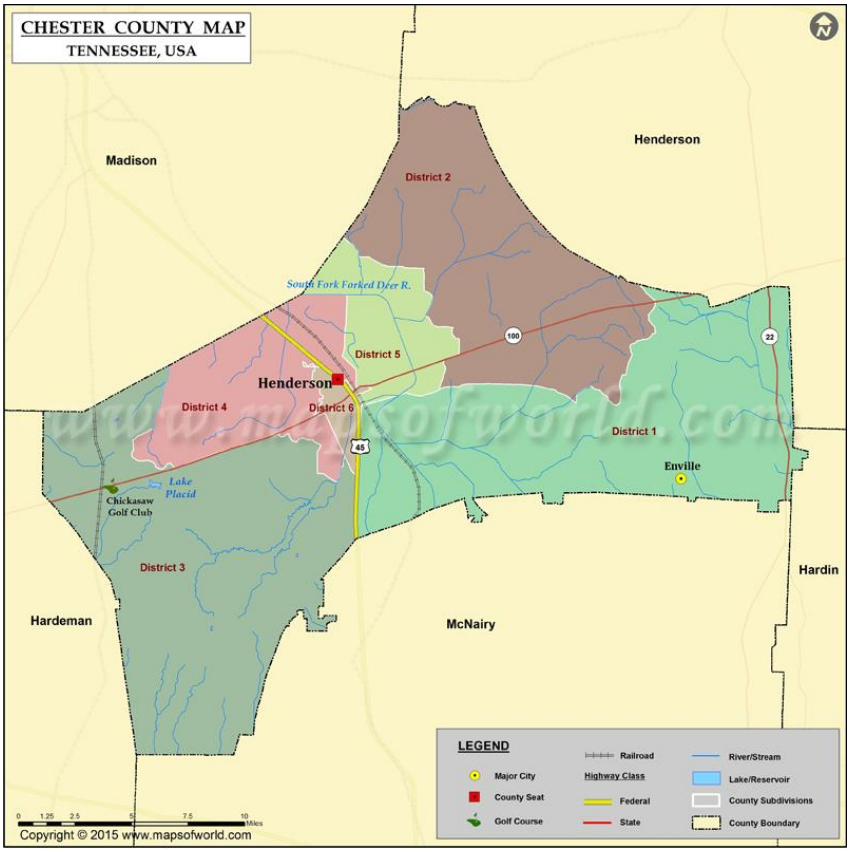
Chester County updated how they would work with the other jurisdictions in monitoring, evaluating, and updating the plan; provided an updated list of mechanisms they could incorporate mitigation within; stated that now the Chester County BEOP has mitigation concepts incorporated into it; and updated how all the jurisdictions would keep the public involved in updating processes.

Section 2: County Profile

Development Trends

Chester County and its jurisdictions can be found in the south-eastern portion of West Tennessee. It is bordered by Madison County to the northwest, Hardeman County to the southwest, and McNairy County to the south. It has a population of 17,131 (2010 census). The county has a total area of 286 square miles, of which 286 square miles is land. Henderson is the county seat.





The incorporated jurisdictions have populations as follows (2010 census):

Jurisdiction	Population
Henderson	6,309
Enville	330
Milledgeville	189

There is a moderate agricultural and industrial base and its support services in the county. Jackson (Madison County), 20 minutes to the north, is focal point for medical services, dining, and entertainment. Chester County is centrally located to all major U.S. markets with transportation access.

Due to current land use trends, the Chester County Property Assessor predicts growth in residential, commercial, and industry. The following noteworthy growth has occurred in the last 10 years:

Location	Type	Information
Unincorporated County	None	• N/A
Henderson	Industrial, Residential	• Expansion of Henderson Stamping • Two new subdivisions • Expansion of Oakmont subdivision
Enville	No Significant Growth	• N/A
Milledgeville	No Significant Growth	• N/A

No new flooding problems are anticipated but will be carefully monitored by county and jurisdictional agencies. This will require careful planning to reduce the risk moving forward.

Jurisdictional & School District Capabilities

The following chart indicates the legal and regulatory adherence of each of the jurisdictions within Chester County:

Jurisdictional Tools, Plans, & Capabilities	Chester County	Henderson	Enville	Milledgeville
Building Codes	**Y**	**Y**	**Y**	**Y**
Zoning	**Y**	**Y**	**Y**	**Y**
Emergency Response Plan	**Y**	**Y**	**Y**	**Y**
National Flood Insurance Program Participant	**Y**	**Y**	**Y**	**Y**
Post-Disaster Recovery Plan	**Y**	**Y**	**Y**	**Y**
Law Enforcement	**Y**	**Y**	**Y**	**Y**
Full Time Fire Services	**Y**	**Y**	**N**	**N**
Grant Writer	**N**	**N**	**N**	**N**
Public Information Officer	**N**	**N**	**N**	**N**

School District Tools, Plans, & Capabilities	Chester County Schools
Emergency Response Plan	**Y**
Post-Disaster Recovery Plan	**N**
Law Enforcement/SRO	**Y**
Grant Writer	**N**
Public Information Officer	**N**
Capital Improvement Funding	**Y**
Bond Funding	**Y**
Private Contributions	**Y**
State/Federal Funding	**Y**
Emergency Notification System	**Y**

Expanding & Improving Mitigation Programs

The county and Henderson have been active in the past in pursuing mitigation projects. Enville and Milledgeville are small jurisdictions, and therefore struggle to find funding to meet match requirements for medium to large expenditure projects, making the expansion of mitigation programs within these jurisdictions a challenge.

Building and zoning codes were addressed in both meetings. Each jurisdiction expressed interest in updating ordnances to reflect more recent codes.

Section 3: Risk Assessment

Hazard Identification

To begin to assess Chester County's risk to natural hazards and identify the community's areas of highest vulnerability, the mitigation committee had to identify which hazards have or could impact the county. This hazard identification process began with researching previous hazard events that have occurred in Chester County by going through newspaper articles, Chester County Emergency Management Agency records, and recalling personal experiences. From there Emergency Management staff also analyzed hazard events that could occur in the county by reviewing scientific studies and the State of Tennessee Hazard Mitigation Plan. The following hazards have been identified as hazards of concern by the Chester County mitigation committee within the update process.

Flooding

Flooding events occur when excess water from rivers and other bodies of water overflow onto riverbanks and adjacent floodplains. In addition, lower lying regions can collect water from rainfall and poorly drained land can accumulate rainfall through ponding on the surface. Floods in Chester County are usually caused by rainfall, but may also be caused by snowmelt and man-made incidents. The below charts explain common ways flooding occurs and common factors that contribute toward the severity of floods.

Common Ways Flooding Occurs	
Methods	**Description**
Overland Flow **(a) Infiltration** **(b) Saturation**	**-**Excess overland flow occurs when the rain is falling more rapidly that it infiltrates into the soil. -Excess overland flow occurs when soil spaces are so full of water that no more rain can be absorbed.
Throughflow	-Rainwater which has infiltrated into unsaturated soil can move horizontally to the river channel. This process is slower than overland flow but faster than base flow.
Baseflow	-Rainwater which has percolated to the aquifer can seep into the river channel. This is the slowest process.

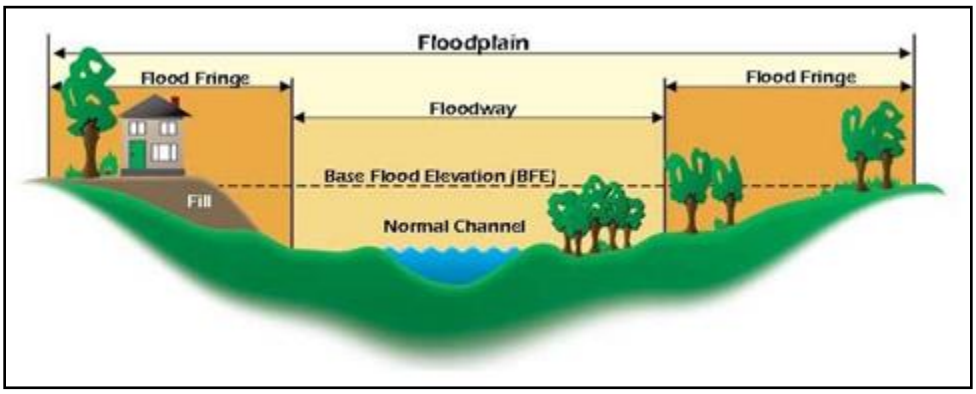
Source: The Field Studies Council

Common Causes of Flooding	
Factor	**Effect on Flooding**
Geology	Impermeable rocks are saturated more quickly than porous and pervious rocks. Saturation excess overland flow is more common. Sandy soils have larger pore spaces than clay soils. Infiltration is most rapid in sandy soils.
Relief	Water reaches the channel more rapidly in a stepper basin as water is travelling more quickly downhill.
Vegetation	Vegetation intercepts a large proportion of rainfall. Where trees are deciduous, discharge is higher in a forested basin in winter as there is less interception.
Meteorological Factors	Where rain is falling faster than the infiltration rate, there is infiltration-excess overland flow. This is common after a summer storm. Snow does not reach the channel but is stored on the ground surface. As snow melts, the meltwater will reach the channel quickly as infiltration is impeded if the ground is still frozen.
Catchment Shape	It takes less time for water to reach the channel in a circular basin as all extremities are roughly equidistant from the channel.
Land Use	Surface runoff is higher in urban areas because there are more urban surfaces (concrete & tarmac) and sewers take water rapidly to rivers. There is less interception and evapotranspiration and more surface runoff in a deforested catchment.
Catchment Size	Water reaches the channel more rapidly in a smaller basin as water has a shorter distance to travel.
Antecedent Conditions	The level of discharge before the storm is called the antecedent discharge. Even a small amount of rain can lead to flooding.

Source: The Field Studies Council

In Chester County some areas are more flood-prone than others. One of the ways of identifying these flood-prone areas is through determining the county's 100- and 500-year floodplains. 100-year floods are calculated to be the level of flood water expected to be equaled or exceeded every 100 years on average, meaning a flood that has a 1% chance of being equaled or exceeded in magnitude in any single year. A 500-year floodplain has a 0.2% chance. A 100-year floodplain would include the areas adjoining a stream, river, or watercourse that would be covered by water in the event of a 100-year flood (see diagram below).

Characteristics of a Floodplain



Source: FEMA

*Detailed Flood Insurance Rate Maps (FIRMs) are also included in **Appendix 5**, which shows where FEMA has placed the 500-year floodplain for each jurisdiction.*

Chester County historically has had many flood events in the past. Based on NOAA NCDC data, the following charts provide a list of flood events occurring in Chester County from January 1950 to present and a list of floods with descriptions of their impacts imposed on the community.

Flood Events in Chester County: January 1950–Present

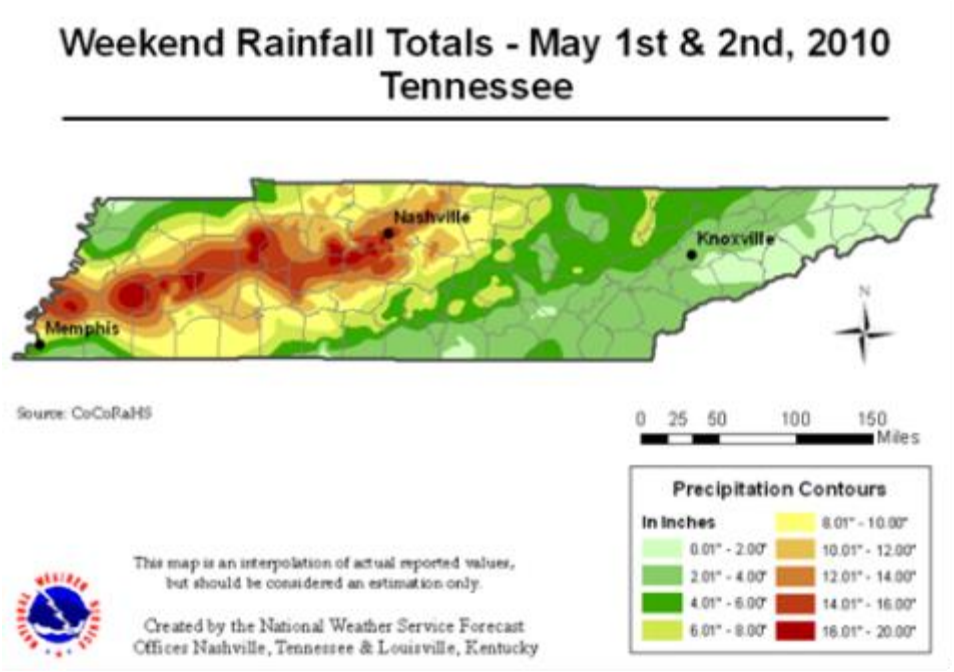
Location	Date	Type	Deaths	Injuries	Property Damage
HENDERSON	10/27/1996	Flash Flood	0	0	1.00K
DEANBURG	10/27/1996	Flash Flood	0	0	1.00K
CHESTER (ZONE)	3/1/1997	Flood	0	0	5.00K
CHESTER (ZONE)	11/28/2001	Flood	0	0	10.00K
COUNTYWIDE	9/26/2002	Flash Flood	0	0	1.00K
HENDERSON	10/10/2002	Flash Flood	0	0	1.00K
HENDERSON	12/19/2002	Flash Flood	0	0	5.00K
HENDERSON	7/28/2003	Flash Flood	0	0	1.00K
COUNTYWIDE	2/5/2004	Flash Flood	0	0	1.00K
JACKS CREEK	6/1/2008	Flash Flood	0	0	50.00K
HENDERSON	12/8/2009	Flash Flood	0	0	0.00K
DEANBURG	5/1/2010	Flash Flood	0	0	150.00K
HENDERSON	5/24/2010	Flash Flood	0	0	0.00K
HENDERSON	2/24/2011	Flash Flood	0	0	0.00K
MASSEYVILLE	4/27/2011	Flash Flood	0	0	0.00K
DEANBURG	1/13/2013	Flood	0	0	0.00K
JACKS CREEK	9/2/2013	Flash Flood	0	0	0.00K
HENDERSON	3/3/2014	Flash Flood	0	0	0.00K
MIFFLIN	7/23/2014	Flash Flood	0	0	0.00K
JACKS CREEK	3/10/2016	Flash Flood	0	0	0.00K
HENDERSON	2/22/2018	Flood	0	0	0.00K
MONTEZUMA	6/1/2018	Flood	0	0	80.00K

The above list represents all listed incidents from the NCDC site for a given time period. If a jurisdiction or district is not listed, there is not a recorded incident of this nature.

Small localized flood events are likely to occur slightly less than once per year (over the last 25 years) in Chester County. The severity of flooding that may occur in the county is measured by depth of inundation. As seen with the May 2010 flood event *(DR-1909-TN)*, it is possible for Chester County to receive up to 12 inches of rain in a 36 hour period. Per the NCDC storm event database, this event caused widespread flooding in Chester County. Very heavy rain, up to 12 inches, produced widespread flooding in Chester County. As many as 30 roads and bridges were flooded or washed out. The flash flood event transitioned to a flood event by late in the afternoon as heavy rain allowed rivers to overflow their

banks. Damages exceeded $150,000. Additionally, jurisdictions experienced the following from this event:

May 1st & 2nd, 2010 Flood Event Details	
Henderson County	22N at Jacks Creek closed, State Route 100 under 18" flood water, Old Jacks Creek Road at Forked Deer River under 12" of flood water, Montezuma/Silerton Road at Turkey Creek under 18" of flood water.
Henderson	Hill Avenue near 4th Street was under 14" of water.
Enville	No significant flooding or impact. Flood is low risk per risk assessment.
Milledgeville	No significant flooding or impact. Flood is low risk per risk assessment.

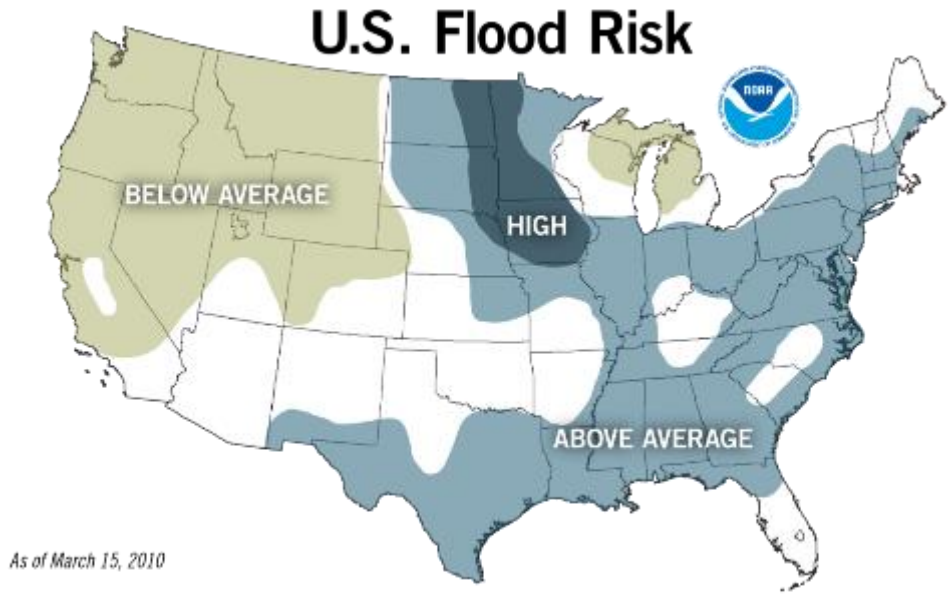


In Chester County, all jurisdictions are susceptible to smaller localized flooding. Areas in the county known to flood more often include:

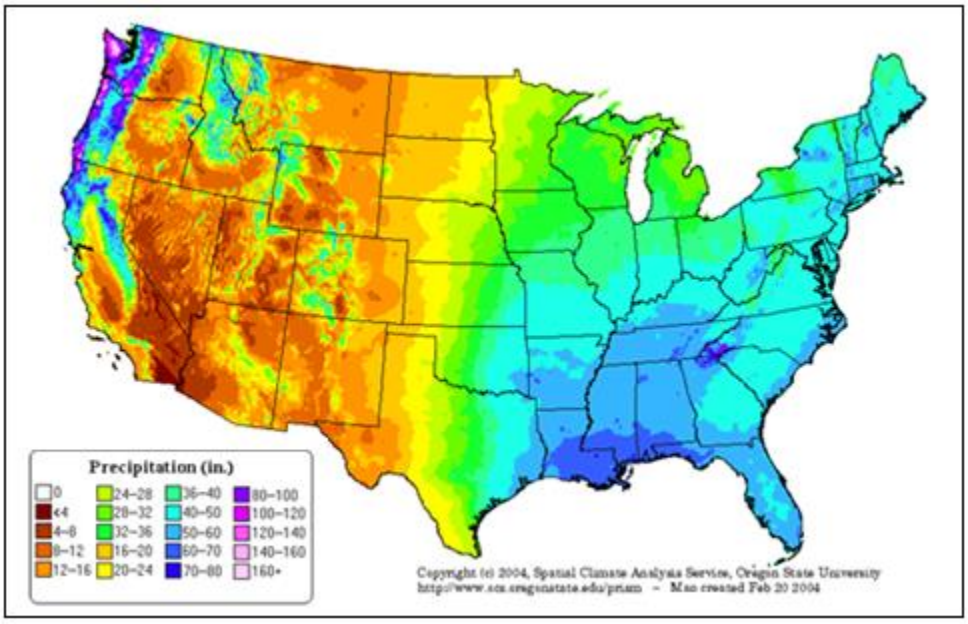
- South Church Street near Highway 45
- Old Jackson Road east of railroad crossing
- North Pisgah Road at bridge before Wilson School
- Hill Avenue and 4th Street

- Plainview Road by Charles Smith Loop
- Rabbit Ranch Road near Highway 200
- Grove Springs Road near Roby Road
- Highway 22A and Lancaster Lane
- Old Finger Road approximately one mile from Highway 45
- Talley Store Road at Talley Lane
- Glendale Road at Allen Penny Loop
- White Avenue near Industrial Drive
- Morgan Road near Highway 100W
- Bray Road at Bray Lane
- Beechwood Street at Mifflin Avenue
- 4th Street between Luray Road and Memorial Avenue
- Old Jacks Creek Road Southeast of the Hwy 100 Bypass

According to a NOAA Flood Risk Map (see map below), the majority of Tennessee was located in an "above average" risk of flooding zone during spring 2010. This proposed vulnerability is coupled with the fact that on average Tennessee usually acquires over 50-60 inches of rainfall a year (see following map).



Average Annual Precipitation per Year (1971-2000)



Source: Spatial Climate Analysis Service, Oregon State University

Chester County uses a ranking system to determine each jurisdiction's vulnerability to flooding events. This system is based off simple arithmetic which analyzes potential impacts to determine vulnerabilities and then analyzes the probability of a flood event occurring to calculate a flood risk ranking for each jurisdiction.

Flooding

Jurisdiction/Applicant	Impacts			Vulnerability
	Human	*Property*	*Business*	*H+P+B=#; #/3=V*
Unincorporated Chester County	**1**	**3**	**1**	**1.7**
Henderson	**2**	**3**	**2**	**2.3**
Enville	**1**	**2**	**1**	**1.3**
Milledgeville	**1**	**2**	**1**	**1.3**
Chester County Schools	**1**	**2**	**2**	**1.7**

Jurisdiction/ Applicant	Vulnerability	Probability	Risk V+P=R	
Unincorporated Chester County	1.7	2	3.7	Moderate
Henderson	2.3	4	6.3	Medium
Enville	1.3	2	3.3	Low
Milledgeville	1.3	2	3.3	Low
Chester County Schools	1.3	2	3.3	Low

Risk	
Low	2-3.6
Moderate	3.7-5.2
Medium	5.3-6.8
High	6.9-8.4
Severe	8.5-10

Human	
Risk of Injuries and Death from the Hazard	
1	Death very unlikely, injuries are unlikely
2	Death unlikely, injuries are minimal
3	Death unlikely, injuries may be substantial
4	Death possible, injuries may be substantial
5	Deaths probable, injuries will likely be substantial

Property	
Amount of Residential Property Damage Associated from Hazard	
1	Less than $500 in damages
2	$500-$10,000 in damages
3	$10,000-$500,000 in damages
4	$500,000-$2,000,000 in damages
5	More than $2,000,000 in damages

Business	
Amount of Business Damage Associated from the Hazard	
1	Less than 3 businesses closed for only a day
2	More than 3 businesses closed for a week
3	More than 3 businesses closed for a few months
4	More than 3 businesses closed indefinitely or relocated
5	A top-10 local employer closed indefinitely

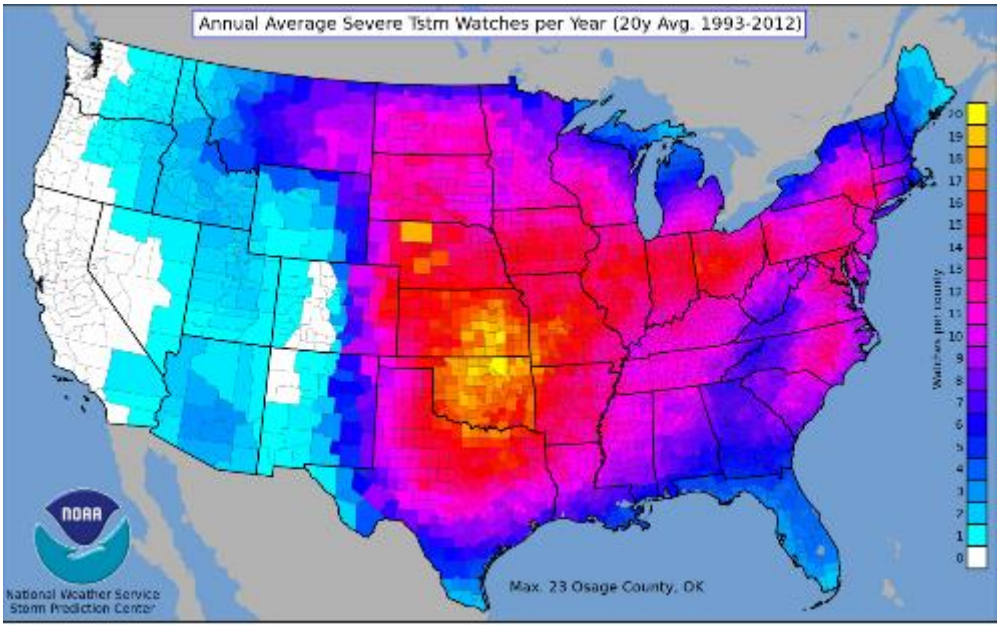
Probability	
Amount of Residential Property Damage Associated from Hazard	
1	Less than once every 10 years
2	About once every 5-10 years
3	About once every 2-5 years
4	About once a year
5	More than once a year

For further information about flooding hazards in Chester County, see the HAZUS vulnerability study in ***Appendix 5***.

Tornadoes/Severe Storms

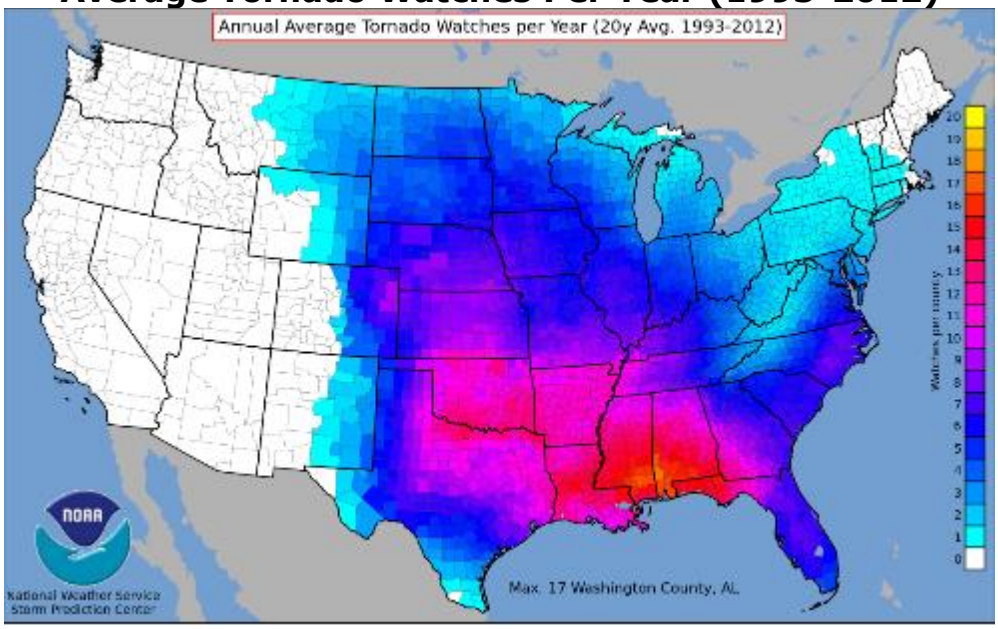
According to the National Weather Service, to consider a storm severe it must encompass one of three traits: produce winds greater than 58 miles per hour (50.4 knots), produce hail ¾ of an inch or greater in diameter, or produce tornadoes. On average, a typical county in Tennessee has about 10 severe storm watches per year (see map below).

Average Severe Storm Watches Per Year (1993-2012)



Source: NOAA/NWS Storm Prediction Center

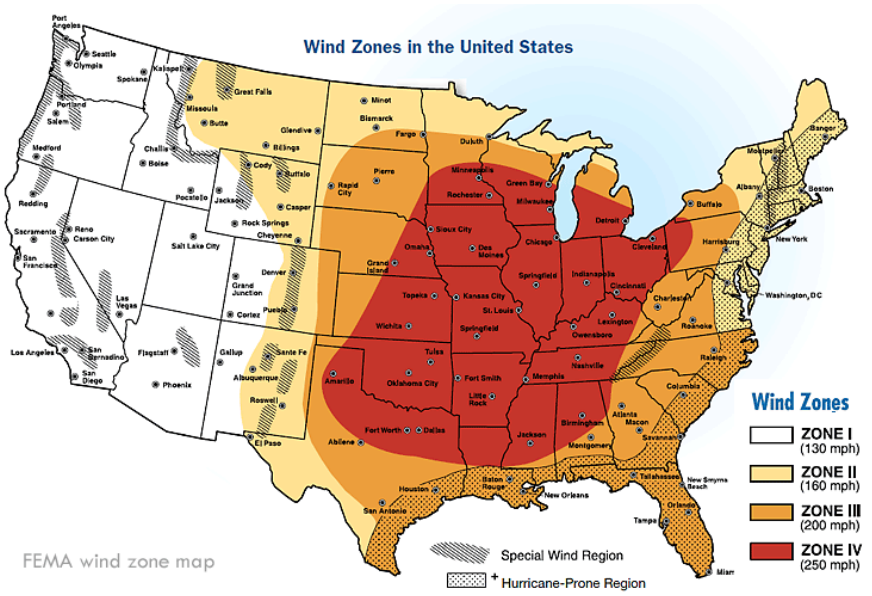
Average Tornado Watches Per Year (1993-2012)



Source: NOAA/NWS Storm Prediction Center

A tornado is a violently rotating column of air that extends from a thunderstorm, etc. down to the ground, and can reach wind speeds of 40 mph to 250 mph and higher. Tornadoes paths, lengths, and widths can vary greatly. In Chester County, all jurisdictions are vulnerable to tornado threats. The following map places much of Tennessee in the highest wind zone (see following map).

Wind Zones in the United States



Source: FEMA

Chester County historically has had several tornado events in the past. Based on NOAA NCDC data, the following chart provides a list of tornado events occurring in Chester County from January 1950 to present.

Tornado Events in Chester County: January 1950–Present

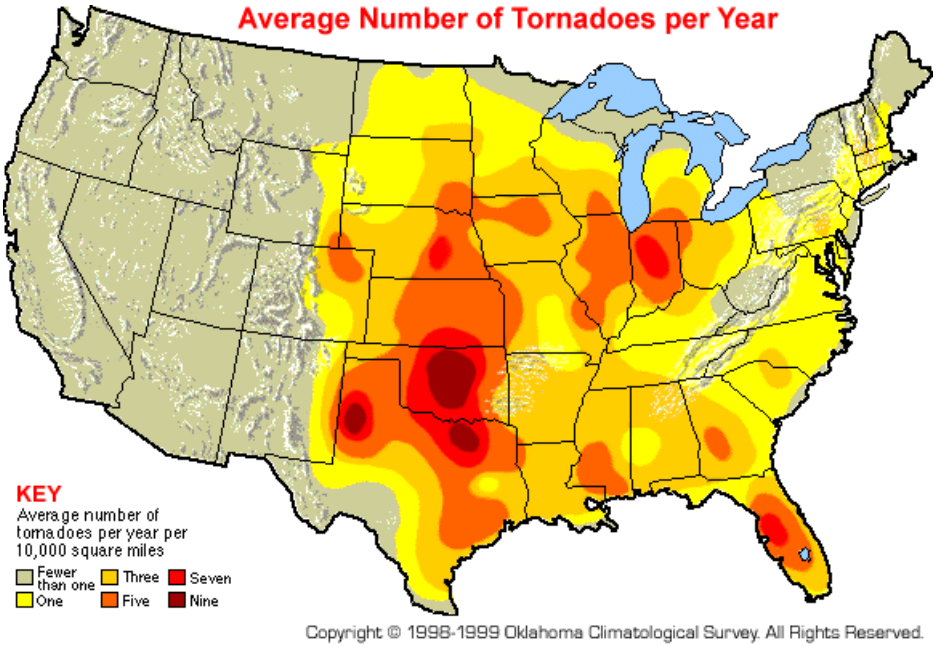
Location	Date	Magnitude	Deaths	Injuries	Property Damage
CHESTER CO.	3/22/1952	F4	23	100	2.500M
CHESTER CO.	3/14/1953	F2	0	0	25.00K
CHESTER CO.	2/23/1962	F1	0	0	250.00K
CHESTER CO.	11/27/1985	F1	0	0	250.00K
CHESTER CO.	11/19/1988	F2	0	0	250.00K
CHESTER CO.	4/28/1990	F1	0	0	250.00K
CHESTER CO.	5/18/1995	F0	0	0	5.00K
MIFFLIN	11/7/1996	F0	0	0	25.00K
HENDERSON	4/16/1998	F0	0	0	1.00K
HENDERSON	1/22/1999	F0	0	0	0.10K
JACKS CREEK	4/26/2011	EF0	0	0	75.00K
MONTEZUMA	4/26/2012	EF2	0	1	400.00K

The above list represents all listed incidents from the NCDC site for a given time period. If a jurisdiction or district is not listed, there is not a

recorded incident of this nature.

Tornadoes occur approximately once every six years in Chester County over the time period of records being kept. The severity of tornadoes that may occur in the county is measured using the Fujita/Enhanced Fujita Scale for tornadoes (see chart below). Based on historical events, in a worst case scenario it is possible for the extent of a tornado to reach an F4 ranking, as demonstrated on March 22nd, 1952. The 1952 tornado resulted in 23 deaths, 100 injuries, and 2.5 million in damages. Adjusted for inflation, this would equal $24.2 million in 2020.

Average Number of Tornadoes Per Year



Source: Oklahoma Climatological Survey

Fujita Scale/Enhanced Fujita Scale for Tornadoes

Fujita / Enhanced Fujita Scale for Tornadoes				
F-Scale	**Fastest Quarter Mile Wind Speed**	**Typical Impacts**	**Enhanced Scale: 3 Sec Wind Gust Speed**	**Enhanced F-Scale**
F0	40-72 MPH	Some damage to chimney; breaks branches off trees; pushes over shallow-rooted trees; damages sign boards.	65-85 MPH	**EF0**
F1	73-112 MPH	Peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.	86-110 MPH	**EF1**
F2	113-157 MPH	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.	111-135 MPH	**EF2**
F3	158-206 MPH	Roof and some walls torn off well-constructed homes; trains overturned; most trees in forest uprooted.	136-165 MPH	**EF3**
F4	207-260 MPH	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.	166-200 MPH	**EF4**
F5	261-318 MPH	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel reinforced concrete structures badly damaged.	Over 200 MPH	**EF5**

Source: NOAA National Weather Service; The Tornado Project

Hail is the frozen form of precipitation, falling as small spheres of solid ice. Even though the risk from hail is relatively low, all jurisdictions have the possibility of hail causing some window and roof damage.

TORRO Hail Index

TORRO Hail Index			
Scale	**Max Diameter**	**Comparisons**	**Typical Impacts**
H0	5-9 MM	Pea	No damage.
H1	10-15 MM	Mothball	Slight general damage to plants, crops.
H2	16-20 MM	Marble	Significant damage to fruit, crops, vegetation.
H3	21-30 MM	Walnut	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored.
H4	31-40 MM	Pigeon's Egg	Widespread glass damage, vehicle bodywork damage.
H5	41-50 MM	Golf Ball	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries.
H6	51-60 MM	Hen's Egg	Bodywork of grounded aircraft dented, brick walls pitted.

H7	61-75 MM	Tennis Ball	Severe roof damage, risk of serious injuries.
H8	76-90 MM	Soft Ball	Severe damage to aircraft bodywork.
H9	91-100 MM	Grapefruit	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open.

Source: The Tornado & Storm Research Organization

The following chart provides hail event information for Chester County. Historically, hail events occur three to four times per year in Chester County. The severity of hail is measured by the diameter of the hail itself, commonly using the TORRO Hail Index (see following chart). Chester County's largest hail extent is reported at 4.5 inches (H9), as indicated on April 24th, 2010. This led to widespread damage, mostly to roofs, siding, out-buildings, and vehicles.

Hail Events in Chester County: January 2000 – Present

Location	Date	Extent	Deaths	Injuries	Property Damage
HENDERSON	1/17/1999	1.75 in.	0	0	0.75K
HENDERSON	1/22/1999	1.75 in.	0	0	0.75K
MONTEZUMA	1/22/1999	1.00 in.	0	0	0.11K
MONTEZUMA	1/22/1999	1.00 in.	0	0	0.11K
HENDERSON	2/11/1999	1.25 in.	0	0	0.25K
HENDERSON	4/27/2000	0.75 in.	0	0	0.01K
JACKS CREEK	8/10/2000	0.75 in.	0	0	0.01K
MASSEYVILLE	2/21/2001	0.75 in.	0	0	0.01K
HENDERSON	2/24/2001	0.75 in.	0	0	0.01K
MIFFLIN	5/11/2001	0.75 in.	0	0	0.01K
MIFFLIN	6/3/2001	1.75 in.	0	0	0.75K
HENDERSON	7/2/2002	1.00 in.	0	0	0.10K
HENDERSON	10/18/2004	0.75 in.	0	0	0.01K
MONTEZUMA	10/19/2004	1.75 in.	0	0	0.75K
HENDERSON	3/22/2005	1.00 in.	0	0	0.30K
JACKS CREEK	8/5/2005	0.75 in.	0	0	0.01K
HENDERSON	4/2/2006	1.00 in.	0	0	3.00K
HENDERSON	4/7/2006	1.00 in.	0	0	5.00K
HENDERSON	4/7/2006	1.25 in.	0	0	11.00K
HENDERSON	4/20/2006	1.75 in.	0	0	18.00K
JACKS CREEK	5/26/2006	0.75 in.	0	0	1.00K
HENDERSON	5/26/2006	0.75 in.	0	0	1.00K
MASSEYVILLE	2/5/2008	1.75 in.	0	0	5.00K
HENDERSON	5/1/2009	1.00 in.	0	0	0.00K
MASSEYVILLE	6/15/2009	0.75 in.	0	0	0.00K
MASSEYVILLE	6/15/2009	1.25 in.	0	0	0.00K
HENDERSON	7/15/2009	0.88 in.	0	0	0.00K
MONTEZUMA	3/25/2010	1.00 in.	0	0	0.00K
HENDERSON	4/24/2010	4.50 in.	0	0	0.00K
MASSEYVILLE	5/14/2010	1.00 in.	0	0	0.00K

JACKS CREEK	2/24/2011	0.75 in.	0	0	0.00K
JACKS CREEK	4/20/2011	1.00 in.	0	0	0.00K
JACKS CREEK	4/26/2011	1.00 in.	0	0	0.00K
HENDERSON	4/26/2012	0.75 in.	0	0	0.00K
HENDERSON	12/17/2012	0.88 in.	0	0	0.00K
HENDERSON	4/27/2013	1.75 in.	0	0	0.00K
HENDERSON	2/20/2014	0.88 in.	0	0	0.00K
HENDERSON	6/7/2014	1.50 in.	0	0	0.00K
ENVILLE	10/13/2014	1.25 in.	0	0	0.00K
HENDERSON	4/15/2015	0.88 in.	0	0	0.00K
HENDERSON	3/31/2016	1.00 in.	0	0	0.00K
JACKS CREEK	3/27/2017	2.00 in.	0	0	0.00K

The above list represents all listed incidents from the NCDC site for a given time period. If a jurisdiction or district is not listed, there is not a recorded incident of this nature.

Severe storm winds most commonly occur as straight-line winds; a downburst of wind created by an area of significantly rain-cooled air that spreads out in all directions after hitting the ground. All jurisdictions are vulnerable to receiving damage from these severe storm winds.

Historically, severe storm wind events occur slightly approximately three times per year in Chester County. The following chart provides severe storm wind event information for Chester County from January 2000 to present. The severity of severe storm winds is commonly measured by wind speed (knots or mph). The largest severe storm wind event within Chester County in recent years was recorded on February 24th, 2011. The damage in these events was a result of wind speeds of over 100 mph. The same thunderstorm complex that produced a tornado in Madison county continued to move northeast and produced downburst winds over parts of Chester county. One person was killed and several buildings were destroyed south of Blue Goose. Nine houses, 26 mobile homes and 22 other structures were destroyed. Another 134 houses, 61 mobile homes and 52 farm structures were damaged. Total damages exceeded $2.6 million.

Wind Events in Chester County: January 2000 – Present

Location	Date	Type	Extent	Deaths	Injuries	Property Damage
COUNTYWIDE	1/17/1999	Thunderstorm Wind		0	0	10.00K
HENDERSON	5/5/1999	Thunderstorm Wind		0	1	100.00K
JACKS CREEK	5/26/2000	Thunderstorm Wind		0	0	5.00K
HENDERSON	7/20/2000	Thunderstorm Wind		0	0	5.00K
HENDERSON	5/31/2001	Thunderstorm Wind		0	0	5.00K
MIFFLIN	6/3/2001	Thunderstorm Wind		0	0	5.00K
ENVILLE	6/3/2001	Thunderstorm Wind		0	0	5.00K
HENDERSON	7/5/2001	Thunderstorm Wind		0	0	20.00K
HENDERSON	10/24/2001	Thunderstorm Wind		0	0	5.00K
SILERTON	5/17/2002	Thunderstorm Wind		0	0	25.00K
HENDERSON	11/10/2002	Thunderstorm Wind		0	0	15.00K
COUNTYWIDE	8/22/2003	Thunderstorm Wind	50 kts. EG	0	0	10.00K
HENDERSON	4/22/2004	Thunderstorm Wind	60 kts. EG	0	0	20.00K
MIFFLIN	5/30/2004	Thunderstorm Wind	50 kts. EG	0	0	10.00K
HENDERSON	7/4/2004	Thunderstorm Wind	50 kts. EG	0	0	5.00K
HENDERSON	8/5/2005	Thunderstorm Wind	55 kts. EG	0	0	5.00K
HENDERSON	8/6/2005	Thunderstorm Wind	55 kts. EG	0	0	15.00K
HENDERSON	11/15/2005	Thunderstorm Wind	50 kts. EG	0	1	10.00K
HENDERSON	4/2/2006	Thunderstorm Wind	50 kts. EG	0	0	10.00K
ENVILLE	4/2/2006	Thunderstorm Wind	50 kts. EG	0	0	5.00K
SILERTON	8/14/2006	Thunderstorm Wind	50 kts. EG	0	0	1.00K
JACKS CREEK	8/17/2007	Thunderstorm Wind	50 kts. EG	0	0	5.00K

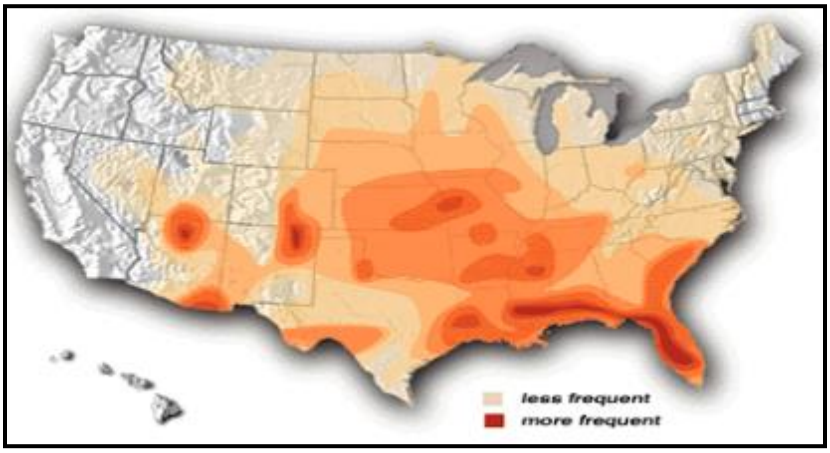
HENDERSON	11/21/2007	Thunderstorm Wind	50 kts. EG	0	0	2.00K
HENDERSON	1/10/2008	Thunderstorm Wind	52 kts. EG	0	0	0.00K
CHESTER (ZONE)	1/29/2008	High Wind	50 kts. EG	0	0	25.00K
JACKS CREEK	5/2/2008	Thunderstorm Wind	50 kts. EG	0	0	2.00K
MASSEYVILLE	6/15/2009	Thunderstorm Wind	52 kts. EG	0	0	0.00K
JACKS CREEK	6/15/2009	Thunderstorm Wind	50 kts. EG	0	0	0.00K
HENDERSON	7/15/2009	Thunderstorm Wind	50 kts. EG	0	0	0.00K
JACKS CREEK	4/7/2010	Thunderstorm Wind	50 kts. EG	0	0	0.00K
JACKS CREEK	4/24/2010	Thunderstorm Wind	50 kts. EG	0	0	10.00K
HENDERSON	4/24/2010	Thunderstorm Wind	50 kts. EG	0	0	0.00K
HENDERSON	5/24/2010	Thunderstorm Wind	50 kts. EG	0	0	0.00K
JACKS CREEK	7/26/2010	Thunderstorm Wind	50 kts. EG	0	0	10.00K
DEANBURG	2/24/2011	Thunderstorm Wind	87 kts. EG	0	0	0.00K
HENDERSON	4/4/2011	Thunderstorm Wind	50 kts. EG	0	0	0.00K
HENDERSON	6/26/2011	Thunderstorm Wind	50 kts. EG	0	0	0.00K
HENDERSON	1/30/2013	Thunderstorm Wind	70 kts. EG	0	4	0.00K
HENDERSON	12/21/2013	Thunderstorm Wind	50 kts. EG	0	0	0.00K
HENDERSON	6/7/2014	Thunderstorm Wind	56 kts. EG	0	0	0.00K
HENDERSON	7/14/2014	Thunderstorm Wind	50 kts. EG	0	0	0.00K
HENDERSON	7/23/2014	Thunderstorm Wind	50 kts. EG	0	0	0.00K
HENDERSON	6/8/2015	Thunderstorm Wind	50 kts. EG	0	0	0.00K
HENDERSON	7/14/2015	Thunderstorm Wind	50 kts. EG	0	0	0.00K
ROBY	3/31/2016	Thunderstorm Wind	50 kts. EG	0	0	0.00K

MIFFLIN	5/28/2018	Thunderstorm Wind	50 kts. EG	0	0	2.00K

The above list represents all listed incidents from the NCDC site for a given time period. If a jurisdiction or district is not listed, there is not a recorded incident of this nature.

Lightning is an enormous electrical discharge that is caused by an imbalance between positive and negative charges. During a storm, colliding particles of rain, ice, or snow increase this imbalance and often negatively charge the lower reaches of storm clouds. Objects on the ground, like steeples, trees, and the Earth itself, become positively charged—creating an imbalance that nature seeks to remedy by passing current between the two charges. Lightning events may affect the entire area of Chester County any time of the year, though they are more numerous in spring and summer.

Lightning Probability Incidence Map:
Annual Frequency of Cloud-to-Ground Lightning



The following chart provides lightning event information for Chester County. Per the NCDC, lighting strikes occur approximately once every twenty years in Chester County. That said, many committee members indicated in the first meeting that actual frequency is actually closer to as high as once per year. On the event below, a local business was struck by lightning. This strike led to a fire which damaged both building and contents.

Recorded Lightning Impacts in Chester County: January 2000 – Present

Location	Date	Deaths	Injuries	Property Damage
HENDERSON	8/24/2002	0	0	30.00K

The above list represents all listed incidents from the NCDC site for a given time period. If a jurisdiction or district is not listed, there is not a recorded incident of this nature.

Throughout the county all buildings and infrastructure are vulnerable to tornadoes and severe storm impacts. Chester County's building stock can be broken down into the following percentage categories: 78% residential, 12% commercial, 4% industrial, 1% agricultural, 1% governmental, 3% religious, and 1% educational. Impacts could range from slight roof damages caused by hail to total structure flattening caused by strong tornadoes. In the county, manufactured homes, electrical lines, and older barns are some of the most vulnerable features.

Chester County uses a ranking system to determine each jurisdiction's vulnerability to severe storm events (with a focus on tornadoes). This system is based off simple arithmetic which analyzes potential impacts to determine vulnerabilities and then analyzes the probability of a severe storm event occurring to calculate a risk ranking for each jurisdiction.

Severe Storms/Tornado

Jurisdiction/Applicant	Impacts			Vulnerability
	Human	*Property*	*Business*	*H+P+B=#; #/3=V*
Unincorporated Chester County	**4**	**4**	**4**	**4.0**
Henderson	**3**	**3**	**3**	**3.0**
Enville	**5**	**3**	**1**	**3.0**
Milledgeville	**2**	**3**	**1**	**2.0**
Chester County Schools	**3**	**4**	**2**	**3.0**

Jurisdiction/ Applicant	Vulnerability	Probability	Risk V+P=R	
Unincorporated Chester County	**4.0**	**3**	**7.0**	**High**
Henderson	**3.0**	**2**	**5.0**	**Moderate**
Enville	**3.0**	**2**	**5.0**	**Moderate**
Milledgeville	**2.0**	**3**	**5.0**	**Moderate**
Chester County Schools	**3.0**	**3**	**6.0**	**Medium**

Risk	
Low	**2-3.6**
Moderate	**3.7-5.2**
Medium	**5.3-6.8**
High	**6.9-8.4**
Severe	**8.5-10**

Human	
Risk of Injuries and Death from the Hazard	
1	Death very unlikely, injuries are unlikely
2	Death unlikely, injuries are minimal
3	Death unlikely, injuries may be substantial
4	Death possible, injuries may be substantial
5	Deaths probable, injuries will likely be substantial

Property	
Amount of Residential Property Damage Associated from Hazard	
1	Less than $500 in damages
2	$500-$10,000 in damages
3	$10,000-$500,000 in damages
4	$500,000-$2,000,000 in damages
5	More than $2,000,000 in damages

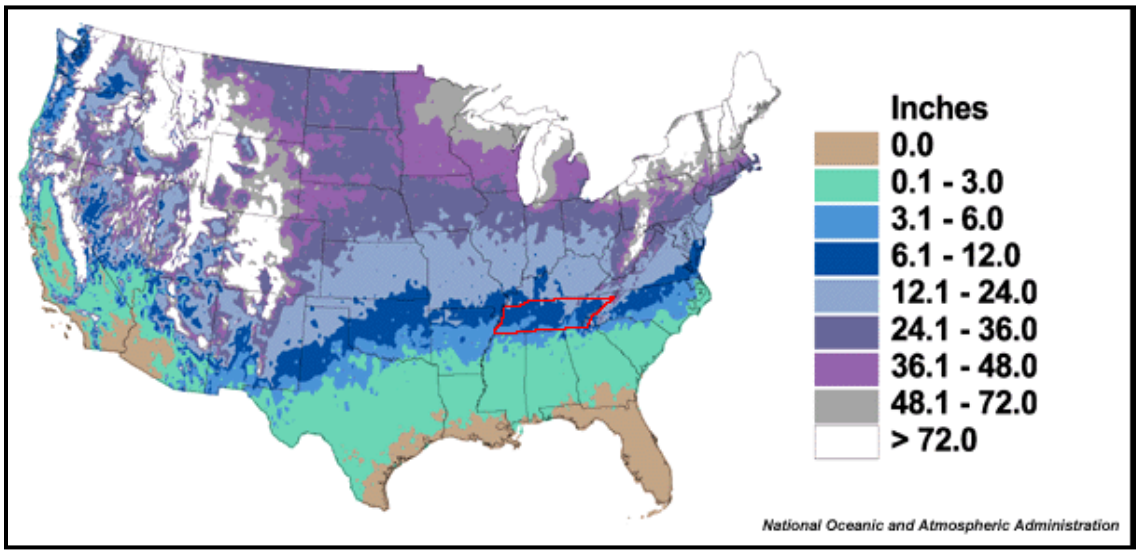
Business	
Amount of Business Damage Associated from the Hazard	
1	Less than 3 businesses closed for only a day
2	More than 3 businesses closed for a week
3	More than 3 businesses closed for a few months
4	More than 3 businesses closed indefinitely or relocated
5	A top-10 local employer closed indefinitely

Probability	
Amount of Residential Property Damage Associated from Hazard	
1	Less than once every 10 years
2	About once every 5-10 years
3	About once every 2-5 years
4	About once a year
5	More than once a year

Freezes/Winter Storms

A freeze occurs when temperatures are below 32 degrees Fahrenheit for a period of time. These temperatures can damage agricultural crops, burst water pipes, and create layers of "black ice." Winter storms are events that can range from a few hours of moderate snow to blizzard-like circumstances that can affect driving conditions and impact communications, electricity, and other services. In Chester County, all jurisdictions are vulnerable to freezes and moderate winter storms in varying degrees, but not to the severity level seen in much of the northern U.S. Mean snowfall per year is from 6-12" annually

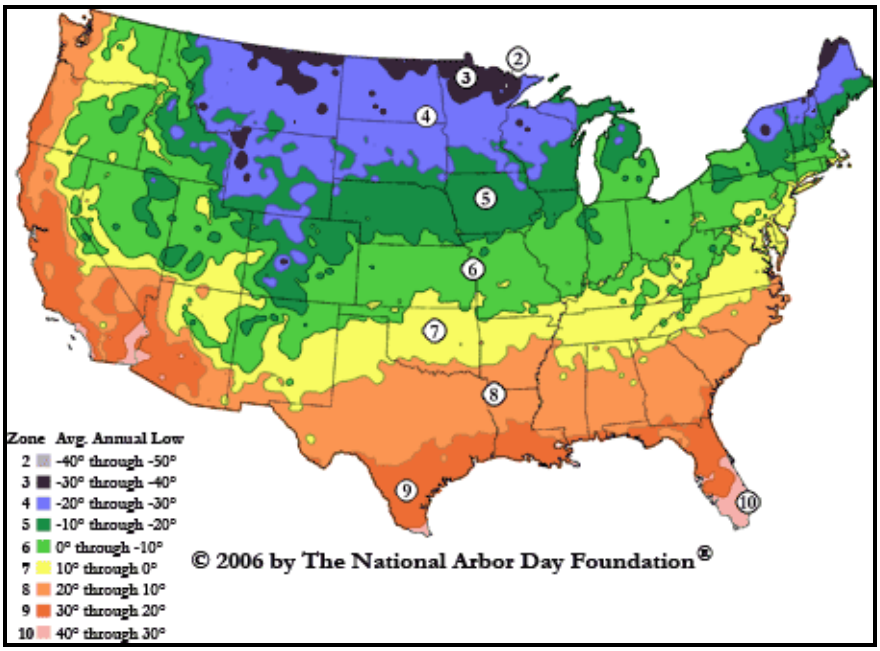
Average Mean Snowfall Per Year



Source: NOAA

Chester County can experience temperatures between 15 to 5 degrees Fahrenheit, thus causing multiple freeze conditions during the winter months (see the following map for other average lows).

Average Annual Low Temperatures



Source: NOAA

The following chart provides winter storm event information for Chester County. Based on previous occurrences, Chester County experiences slightly greater than three winter weather events per year. Winter weather can occasionally be severe, as illustrated in the winter storm on January 15th, 1998. During this event, a winter storm brought a mix of freezing rain, sleet and snow to much of southwest Tennessee. Numerous trees, power lines and phone lines were brought down by the freezing rain and sleet leaving more than 75,000 homes without power. Several areas had fallen trees damaging homes and cars. Up to 4 inches of snow accumulated in some areas.

Winter Events in Chester County: January 2000 – Present

Jurisdiction	Date	Type	Deaths	Injuries	Property Damage
CHESTER (ZONE)	2/5/2002	Winter Storm	0	0	0.00K
CHESTER (ZONE)	12/22/2004	Winter Storm	0	0	10.00K
CHESTER (ZONE)	2/10/2006	Winter Storm	0	0	1.00K
CHESTER (ZONE)	2/18/2006	Winter Storm	0	0	1.00K
CHESTER (ZONE)	2/1/2007	Winter Weather	0	0	0.00K
CHESTER (ZONE)	1/26/2008	Winter Weather	0	0	0.00K
CHESTER (ZONE)	3/7/2008	Winter Storm	0	0	0.00K
CHESTER (ZONE)	2/28/2009	Winter Storm	0	0	0.00K
CHESTER (ZONE)	3/1/2009	Winter Storm	0	0	0.00K
CHESTER (ZONE)	1/29/2010	Winter Storm	0	0	0.00K
CHESTER (ZONE)	2/8/2010	Winter Storm	0	0	0.00K
CHESTER (ZONE)	1/9/2011	Winter Storm	0	0	0.00K

CHESTER (ZONE)	1/20/2011	Winter Weather	0	0	0.00K
CHESTER (ZONE)	1/25/2011	Winter Storm	0	0	0.00K
CHESTER (ZONE)	2/7/2011	Winter Weather	0	0	0.00K
CHESTER (ZONE)	2/9/2011	Winter Storm	0	0	0.00K
CHESTER (ZONE)	11/28/2011	Winter Weather	0	0	0.00K
CHESTER (ZONE)	1/15/2013	Winter Weather	0	0	0.00K
CHESTER (ZONE)	12/7/2013	Winter Storm	0	0	0.00K
CHESTER (ZONE)	3/2/2014	Winter Storm	0	0	0.00K
CHESTER (ZONE)	2/16/2015	Winter Storm	0	0	0.00K
CHESTER (ZONE)	2/20/2015	Winter Storm	0	0	0.00K
CHESTER (ZONE)	3/4/2015	Winter Storm	0	0	0.00K
CHESTER (ZONE)	1/22/2016	Winter Weather	0	0	0.00K
CHESTER (ZONE)	1/6/2017	Winter Weather	0	0	0.00K
CHESTER (ZONE)	3/11/2017	Winter Weather	0	0	0.00K
CHESTER (ZONE)	1/12/2018	Winter Storm	0	0	0.00K
CHESTER (ZONE)	1/16/2018	Winter Weather	0	0	0.00K
CHESTER (ZONE)	11/14/2018	Winter Weather	0	0	0.00K

The above list represents all listed incidents from the NCDC site for a given time period. If a jurisdiction or district is not listed, there is not a recorded incident of this nature.

Throughout the county all buildings and infrastructure are vulnerable to tornadoes and severe storm impacts. Chester County's building stock can be broken down into the following percentage categories: 78% residential, 12% commercial, 4% industrial, 1% agricultural, 1% governmental, 3% religious, and 1% educational. In the county, manufactured homes, electrical lines, and older barns are some of the most vulnerable features. Many of these structures wouldn't receive direct impacts from winter storms but they could receive indirect impacts such as downed electrical lines that cut off electricity to the structures, frozen pipelines that crack, destroyed agriculture crops, and customers not being able to access travels to the structures due to ice covered roads. In the county, road traveling conditions, electrical lines, and agricultural functions are some of the most vulnerable features.

Chester County uses a ranking system to determine each jurisdiction's vulnerability to freezes/winter storm events. This system is based off simple arithmetic which analyzes potential impacts to determine vulnerabilities and then analyzes the probability of a freeze/winter storm event occurring to calculate a risk ranking for each jurisdiction.

In evaluating the risk of winter storms, jurisdictions viewed incidents that impacted day-to-day business as opposed to all incidents indicated by the NCDC. Additionally, Chester County Schools views the threat as impacting

the ability to transport school children as opposed to a direct threat to infractructure.

Winter Storms

Jurisdiction/Applicant	Impacts			Vulnerability
	Human	*Property*	*Business*	*H+P+B=#; #/3=V*
Unincorporated Chester County	**1**	**3**	**1**	**1.7**
Henderson	**2**	**3**	**2**	**2.3**
Enville	**4**	**3**	**1**	**2.7**
Milledgeville	**1**	**2**	**1**	**1.3**
Chester County Schools	**2**	**2**	**2**	**2.0**

Jurisdiction/ Applicant	Vulnerability	Probability	Risk *V+P=R*	
Unincorporated Chester County	**1.7**	**3**	**4.7**	**Moderate**
Henderson	**2.3**	**4**	**6.3**	**Medium**
Enville	**2.7**	**2**	**4.7**	**Low**
Milledgeville	**1.3**	**3**	**4.3**	**Low**
Chester County Schools	**2.0**	**2**	**4.0**	**Moderate**

Risk	
Low	**2-3.6**
Moderate	**3.7-5.2**
Medium	**5.3-6.8**
High	**6.9-8.4**
Severe	**8.5-10**

Human	
Risk of Injuries and Death from the Hazard	
1	Death very unlikely, injuries are unlikely
2	Death unlikely, injuries are minimal
3	Death unlikely, injuries may be substantial
4	Death possible, injuries may be substantial
5	Deaths probable, injuries will likely be substantial

Property	
Amount of Residential Property Damage Associated from Hazard	
1	Less than $500 in damages
2	$500-$10,000 in damages
3	$10,000-$500,000 in damages
4	$500,000-$2,000,000 in damages
5	More than $2,000,000 in damages

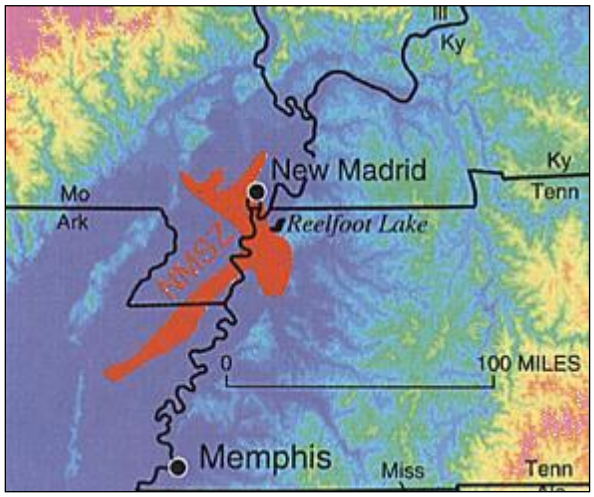
Business	
Amount of Business Damage Associated from the Hazard	
1	Less than 3 businesses closed for only a day
2	More than 3 businesses closed for a week
3	More than 3 businesses closed for a few months
4	More than 3 businesses closed indefinitely or relocated
5	A top-10 local employer closed indefinitely

Probability	
Amount of Residential Property Damage Associated from Hazard	
1	Less than once every 10 years
2	About once every 5-10 years
3	About once every 2-5 years
4	About once a year
5	More than once a year

Earthquakes

Chester County is in close proximity to the major intraplate (within a tectonic plate) seismic zone known as the New Madrid Seismic Zone. The New Madrid Seismic Zone (NMSZ) is an approximately 120-mile long fault system that stretches across five states including Western Tennessee.

New Madrid Seismic Zone



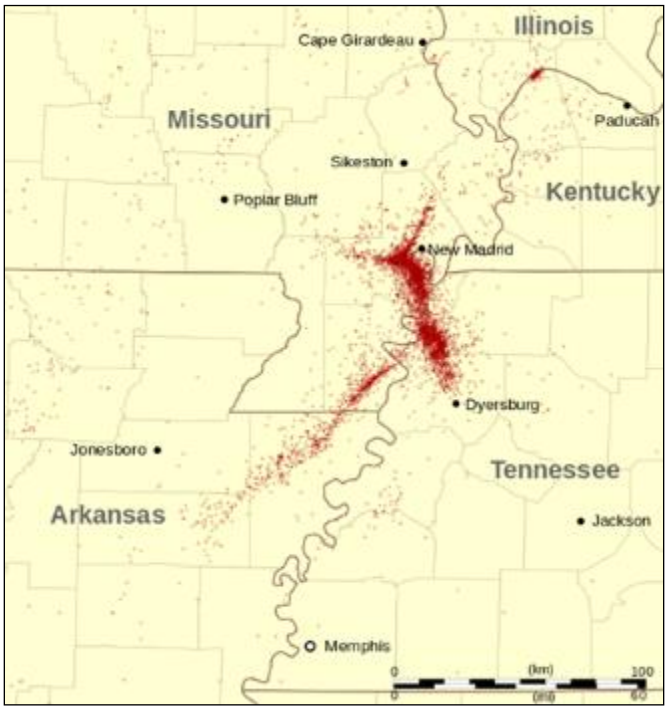
Historically, the zone is known for producing four of the largest North American earthquakes in recorded history, all in which would have had been felt in Chester County. This includes the noted three-month period between December 1811 and February 1812 that had quakes reaching Richter Scale magnitudes into the 7.0 through 8.6 ranges, which created Reelfoot Lake in Lake County, Tennessee.

Richter Scale for Earthquakes		
Magnitudes	**Description**	**Typical Impacts**
< 2.0	Micro	Not felt.
2.0-2.9	Slight	Generally not felt, but recorded.
3.0-3.9	Minor	Often felt, but rarely causes damage.
4.0-4.9	Light	Noticeable shaking of indoor items, rattling noises. Significant damage likely.
5.0-5.9	Moderate	Can cause major damage to poorly constructed building over small regions. At most slight damage to well-designed buildings.
6.0-6.9	Strong	Can be destructive in areas up to about 100 miles across populated areas.
7.0-7.9	Major	Can cause serious damage over larger areas.
8.0-8.9	Great	Can cause serious damage in areas several hundred miles across.
9.0-9.9	Epic	Devastating in areas several thousand miles across.

Source: USGS

Since the 1812 earthquakes, the largest recorded quakes from this zone were the October 1895, 6.6 magnitude quake (epicenter Charleston, MO) and the November 1968, 5.5 magnitude quake (epicenter in Dale, IL). From the time when seismic measurement instruments were installed in and around the zone in the 1970's, more than 4,000 small earthquakes have been recorded, with the vast majority being too small to be felt.

NMSZ Earthquakes Recorded Since 1974

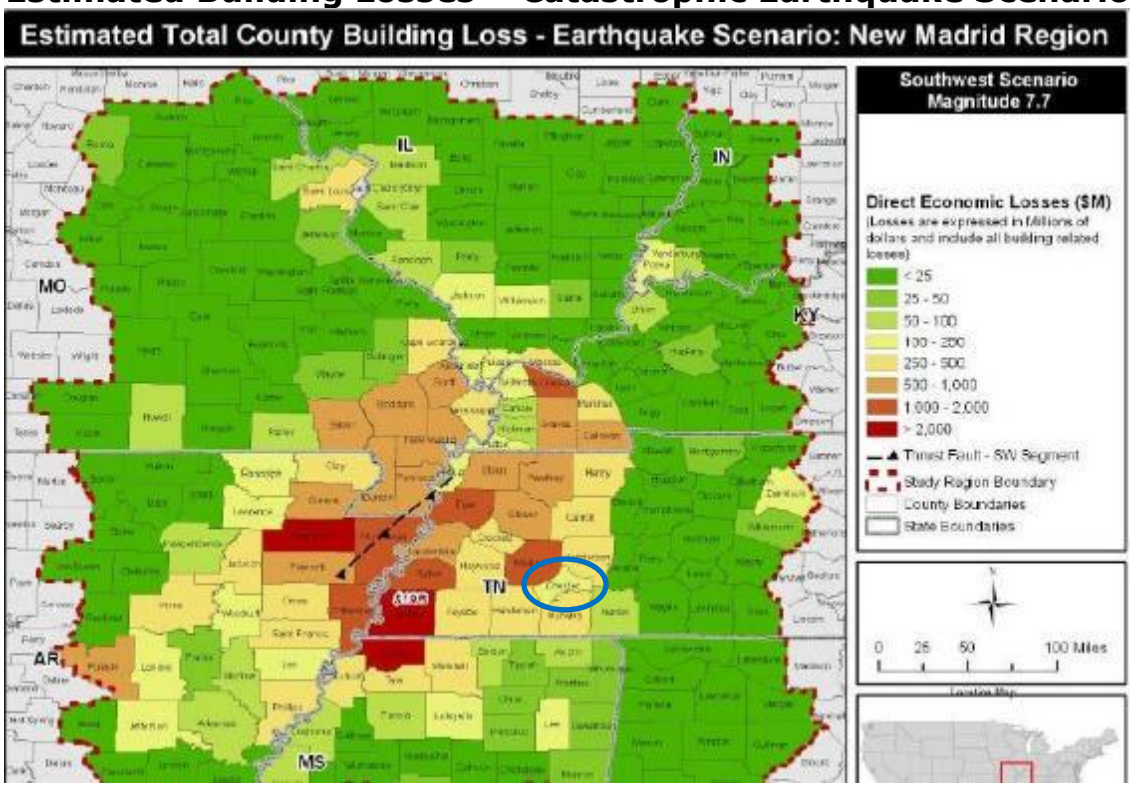


Source: USGS

According to a FEMA report filed in 2008, a serious earthquake in the NMSZ could result in the highest economic loss due to a natural disaster in U.S. history, causing widespread and catastrophic damage across a seven-state radius with most of the worst impacts taking place in Western Tennessee (includes Chester County). Based on this report, a 7.7

magnitude quake in the NMSZ would result in thousands of fatalities, hundreds-of-millions of dollars in damages to structures, and total disruption of vital infrastructure in Western Tennessee.

Estimated Building Losses – Catastrophic Earthquake Scenario



Source: USGS

Chester County sits in what FEMA/TEMA considers the 20-county New Madrid Impact Zone. Statistical earthquake vulnerability studies from FEMA show that out of these 20 counties that Chester County will receive moderate to severe impacts because of its close proximity to the NMSZ. As indicated in the above map, building damage will range from $250-500 million in a catastrophic earthquake event.

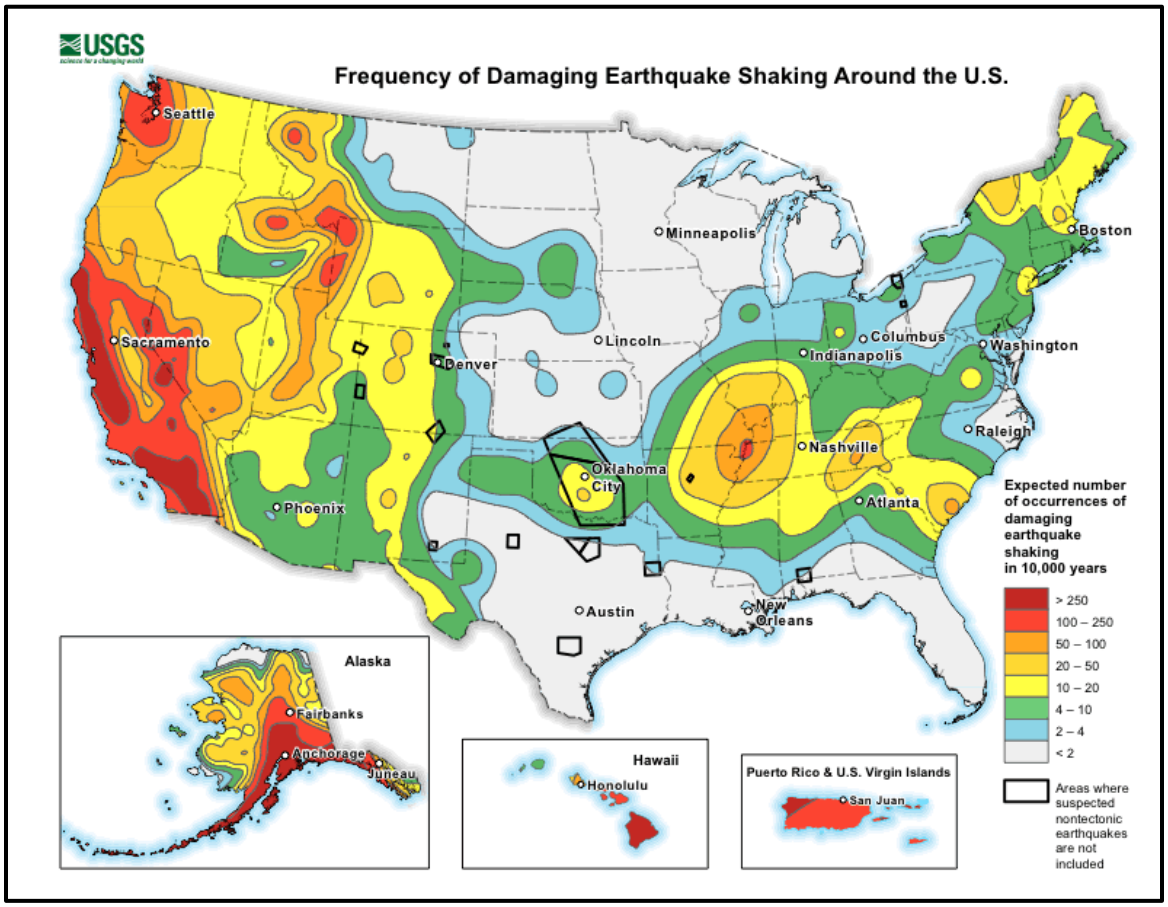
Furthermore, according to the 2007 Mid-American Earthquake (MAE) Center Study, Chester County will experience the following in a catastrophic earthquake scenario:

- 62 injuries
- 3 fatalities
- 475 displaced residents, of which 122 will require shelter
- 63,000 tons of debris
- >14% of residences will experience moderate or greater damage
- <1% police station functionality on day 1

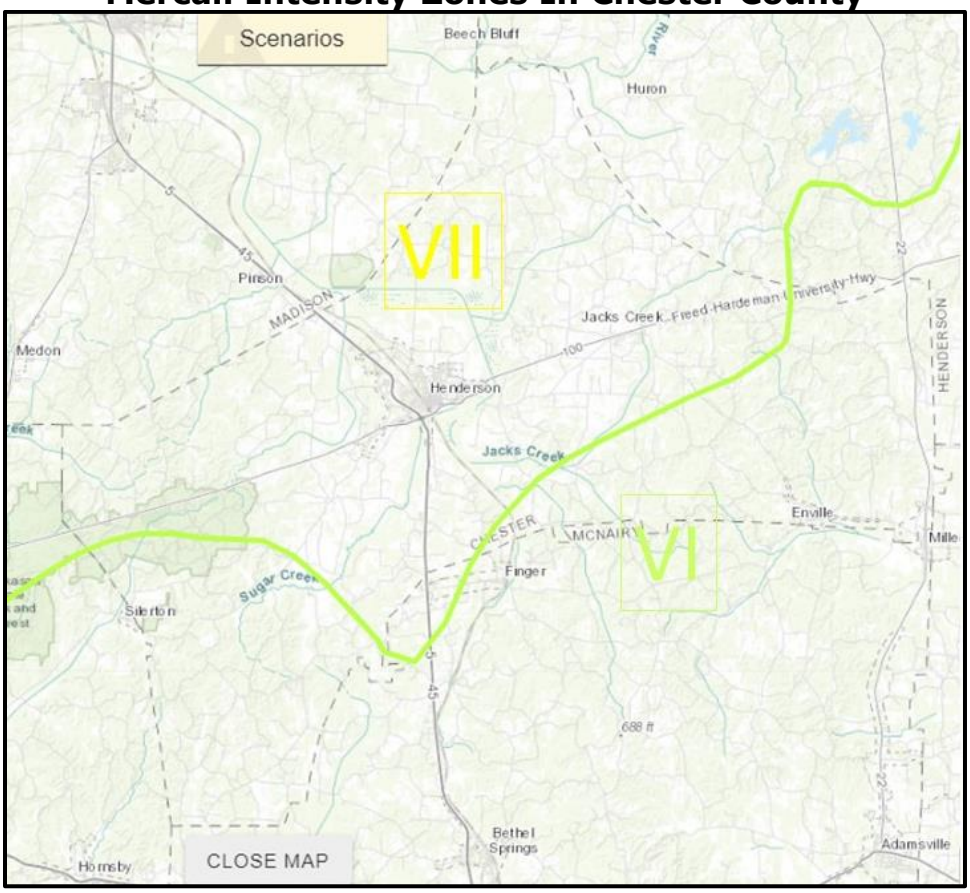
- <1% fire station functionality on day 1
- <1% school functionality on day 1

Throughout the county many buildings and the majority of infrastructure networks could be vulnerable to earthquake impacts. Chester County's building stock can be broken down into the following percentage categories: 78% residential, 12% commercial, 4% industrial, 1% agricultural, 1% governmental, 3% religious, and 1% educational. Throughout the county all buildings and infrastructure are vulnerable to earthquake impacts.

National Seismic Hazard Map
Ground Motions with a 2% Chance of Occurring in 50 Years



Mercali Intensity Zones In Chester County



Source: USGS

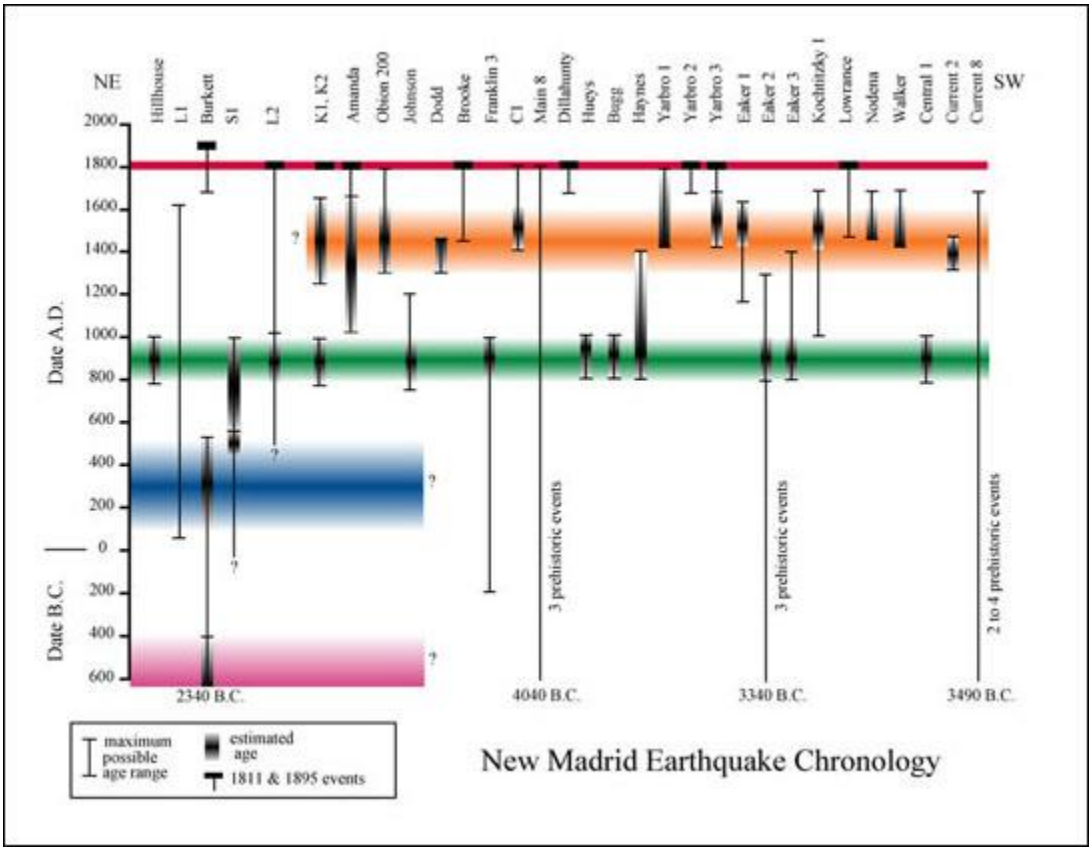
As indicated in the above maps, all of Chester County's jurisdictions and districts sit within intensity zones VII (very-strong) to VI (strong) of the Modified Mercali Intensity Scale due to its proximity to the New Madrid Seismic Zone.

The following is an abbreviated description of the levels of Modified Mercalli Intensity.

Intensity	Shaking	Description/Damage
I	Not felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest,especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Moderate	Felt by nearly everyone, many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Very strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

The current lack of apparent land movement along the NMSZ has long puzzled scientists. Currently, GPS measurements show that the NMSZ faults are moving no more than 0.0079 inches a year. In contrast the San Andreas Fault in California moves up to 1.5 inches a year. This has led some researchers to believe that the fault may be "shutting down" while others say it is a "sleeping giant." These differing views have made it difficult for public policy makers to decide on if, how, and how much to prepare for and spend on mitigating a potential large-scale earthquake.

New Madrid Seismic Zone Earthquake Liquefaction Chronology



Source: USGS

Over the past decade, paleoseismic studies have begun to unravel the earthquake history of the New Madrid seismic zone. Studies focusing on earthquake-induced liquefaction features utilized archaeology and radiocarbon dating to estimate the ages of liquefaction features, and thus, the timing of the earthquakes that caused them. In this way, sand blows across the New Madrid region were found to have formed during earthquakes about 1450 A.D., 900 A.D., 300 A.D., and 2350 B.C.

In addition, the size and spatial distributions of historic and sand blows that formed about 1450 A.D. and 900 A.D. were determined to be strikingly similar to each other, suggesting that the prehistoric earthquakes had similar locations and magnitudes to the 1811-1812 earthquakes. Furthermore, sand blows attributed to the 1450 A.D., 900 A.D., and 2350 B.C. earthquakes are composed of multiple, fining upward layers similar in thickness to those that formed in 1811-1812. These observations support the interpretation that the prehistoric events were similar in location and magnitude to the 1811-1812 earthquakes, and also suggest that they too were earthquake sequences. Paleoseismic studies

concluded that the New Madrid seismic zone generated magnitude 7 to 8 earthquakes about every 500 years during the past 1,200 years.

Chester County uses a ranking system to determine each jurisdiction's vulnerability to a large NMSZ earthquake. This system is based off simple arithmetic which analyzes potential impacts to determine vulnerabilities and then analyzes the probability of an earthquake event occurring to calculate a risk ranking for each jurisdiction.

Earthquake

Jurisdiction/Applicant	Impacts			Vulnerability
	Human	*Property*	*Business*	*H+P+B=#; #/3=V*
Unincorporated Chester County	**1**	**4**	**4**	**3.0**
Henderson	**3**	**3**	**3**	**3.0**
Enville	**4**	**3**	**1**	**2.7**
Milledgeville	**3**	**2**	**2**	**2.3**
Chester County Schools	**4**	**3**	**3**	**3.3**

Jurisdiction/ Applicant	Vulnerability	Probability	Risk	
			V+P=R	
Unincorporated Chester County	**3.0**	**1**	**4.0**	**Moderate**
Henderson	**3.0**	**1**	**4.0**	**Moderate**
Enville	**2.7**	**1**	**3.7**	**Moderate**
Milledgeville	**2.3**	**1**	**3.3**	**Low**
Chester County Schools	**3.3**	**1**	**4.3**	**Moderate**

Risk	
Low	**2-3.6**
Moderate	**3.7-5.2**
Medium	**5.3-6.8**
High	**6.9-8.4**
Severe	**8.5-10**

Human	
Risk of Injuries and Death from the Hazard	
1	Death very unlikely, injuries are unlikely
2	Death unlikely, injuries are minimal
3	Death unlikely, injuries may be substantial
4	Death possible, injuries may be substantial
5	Deaths probable, injuries will likely be substantial

Property	
Amount of Residential Property Damage Associated from Hazard	
1	Less than $500 in damages
2	$500-$10,000 in damages
3	$10,000-$500,000 in damages
4	$500,000-$2,000,000 in damages
5	More than $2,000,000 in damages

Business	
Amount of Business Damage Associated from the Hazard	
1	Less than 3 businesses closed for only a day
2	More than 3 businesses closed for a week
3	More than 3 businesses closed for a few months
4	More than 3 businesses closed indefinitely or relocated
5	A top-10 local employer closed indefinitely

Probability	
Amount of Residential Property Damage Associated from Hazard	
1	Less than once every 10 years
2	About once every 5-10 years
3	About once every 2-5 years
4	About once a year
5	More than once a year

Chester County Declared Disasters 2009 – 2019

Year	Disaster Recovery Number(s)	Hazard(s)
2011	DR-1974-TN	Tennessee Severe Storms, Tornadoes, Straight-line Winds, And Associated Flooding
	DR-1978-TN	Tennessee Severe Storms, Flooding, Tornadoes, And Straight-line Winds
2012		
2013		
2014		
2015		
2016		
2018		
2019		
2020	DR-4515-TN	Tennessee COVID-19 Pandemic
	DR-4550-TN	Tennessee Severe Storms, Straight-line Winds, And Flooding

Section 4: Mitigation Strategy

Mitigation

The purpose for developing a set of goals is to clearly state the community's overall vision for hazard mitigation and to provide a path towards building a safer, more resilient community. The Chester County Hazard Mitigation Committee identified the following goals to be the forefront in the overall development of this plan update. All actions/projects recommended as mitigation efforts for the Hazard Mitigation Plan must first meet or further at least one of these goals. The goals are provided in a ranked order where the first goal is paramount. There have been no changes to the goals and priorities from the previous plan.

Goals

1. a safe environment through minimum exposure to the risk of natural hazards;

2. promote public awareness of these hazards;

3. insure government preparedness and better coordinated responses to these hazards;

4. continue to evaluate and plan for all four phases of an emergency (mitigation, preparedness, response, & recovery)

5. continue to maintain current and ongoing mitigation actions (especially in regards to floodplain issues)

Identification and Prioritization of Mitigation Projects

Chester County has developed a comprehensive range of mitigation projects. These projects were solicited and identified by the different entities that make up the Chester County Hazard Mitigation Committee. Once the proposed projects attained a sponsoring agency and the details of the projects were discussed by the committee, the committee then proceeded to prioritize the mitigation projects.

The prioritization process was important since most mitigation projects represent a large investment of financial and personal resources. By evaluating each project's degree of feasibility and the level of costs versus

benefits, Chester County was able to determine when and which projects should be implemented based on available funding and time.

For the plan update, the Chester County Hazard Mitigation Committee used the SAFE-T method to prioritize these projects. This approach was adopted from the successful methodology used by other counties in FEMA Region 4. This rating system uses five variables to evaluate the overall feasibility and appropriateness: Societal, Administrative, Financial, Environmental, and Technical. A focus on this methodology emphasizes the use of a cost-benefit review to maximize benefits.

Project Prioritization Method: SAFE-T			
Variable		Value	Description
S	**Societal:** The public must support the overall implementation strategy and specified mitigation actions. The projects will be evaluated in terms of community acceptance and societal	1	Low community priority, few societal benefits
		2	Moderate community acceptance / priority
		3	High community acceptance / priority
A	**Administrative:** The projects will be evaluated for anticipated staffing and maintenance requirements to determine if the jurisdiction has the personnel and administrative capabilities necessary to implement the project or whether outside help will be needed.	1	High staffing, outside needed
		2	Some staffing, help may be needed
		3	Low staffing, no outside help needed
F	**Financial:** The projects will be evaluated on their general cost-effectiveness and whether additional outside funding will be required	1	Somewhat cost-effective
		2	Moderately cost-effective
		3	Very cost-effective
E	**Environmental:** The projects will be evaluated for any immediate or long-term environmental impacts caused by their construction or operation	1	Many environmental impacts, possibly long term
		2	Some environmental impacts, some possibly long term
		3	Few, if any, environmental impacts
T	**Technical:** the projects will be evaluated on their ability to reduce losses in the long-term, whether there are secondary impacts, and whether the proposed project solves the associated problem or if additional components are necessary.	1	Other actions are needed or short-term fix
		2	Other actions may be needed for long-term fix
		3	Other actions not needed, long-term fix

Committee members ranked the projects as a group by determining the value for each variable and then by adding the variables rates up for a project sum value. All the project rankings can be seen on the Chester County Hazard Mitigation Project List.

Chester County Project List

The following Project List provides an overview of all projects decided on by the Chester County Hazard Mitigation Committee. This includes

potential funding sources, implementation timeframes, the project's responsible agency, and other information. This list is to remain active and updated. Additionally, any hazard determined to be "low" by a jurisdiction was determined by the committee to not necessitate a corresponding project. Lastly, Chester County Schools lists Winter Storm as moderate, but that threat is limited to the transportation of students rather than actual threat to infrastructure.

Chester County Project List

Chester County															
Project Number	Priority Score	Jurisdiction Priority Rank (High, Medium, Low)	Action/Project	Hazard Mitigated				Addresses New or Existing Buildings/ Infrastructure	Estimated Cost	Responsible Agency	Funding Sources				Population Affected	Timeframe
				Flood	Severe Storm	Winter Storm	Earthquake				HMGP	PDM	FMA	Local		
C01	15	L	Community Safe Space Jack's Creek		x			New	$150,000	Chester County EMA	x	x			400	2-3 Years
C02	15	L	Community Safe Space Enville		x			New	$150,000	Chester County EMA	x	x			500	2-3 Years
C03	15	L	Community Safe Space Montezuma		x			New	$150,000	Chester County EMA	x	x			400	2-3 Years
C04	15	L	Community Safe Space Hickory Corner		x			New	$150,000	Chester County EMA	x	x			500	2-3 Years
C05	15	L	Community Safe Space Mifflin		x			New	$150,000	Chester County EMA	x	x			400	2-3 Years

C06	14	M	Safe room community building		x	x		New	$900,000	Chester County EMA	x	x			1,800	2-3 Years
C07	14	H	Enlarge culvert Enville Road	x				Existing	$40,000	Chester County Highway Department	x	x	x		1,000	2-3 Years
C08	13	H	Add 911 adress hous numbers in fire services area	x	x	x	x	Both	$20,000	Chester County Fire				x	32,000	2-3 Years
C09	12	M	Emergency generator for fire station		x	x	x	Existing	$65,000	Chester County Fire	x	x			100	2-3 Years
C10	11	M	Public awareness for disaster kits	x	x	x	x	Both	$50,000	Chester County EMA				x	18,000	2-3 Years

Henderson															
Project Number	Priority Score	Jurisdiction Priority Rank (High, Medium, Low)	Action/Project	Hazard Mitigated				Addresses New or Existing Buildings/ Infrastructure	Estimated Cost	Responsible Agency	Funding Sources				Population Affected	Timeframe
				Flood	Severe Storm	Winter Storm	Earthquake				HMGP	PDM	FMA	Local		
H01	13	H	Generator for fire department	x	x	x	x	Existing	$20,000	Henderson Fire Department	x	x			6,000	2-3 Years
H02	13	H	Drainage improvement South Church and Highway 45	x				Existing	$500,000	TDOT	x	x	x		6,000	3-5 Years
H03	13	H	Public awareness natural hazards	x	x	x	x	Both	$1,000	Henderson City Hall				x	2,000	Annually
H04	12	M	Drainage improvement West Main Street	x				Existing	$175,000	Henderson Roads Department	x	x	x		6,000	2-3 Years
H05	11	M	Maintain rights of way	x	x	x		Both	$100,000	Henderson Roads Department/Henderson Public Works				x	6,000	Annually

H06	11	M	Drainage improvement Old Jacks Creek 1220	x				Existing	$50,000	Henderson Roads Department	x	x	x		4,000	2-3 Years
H07	11	M	Equipment for brush removal	x	x	x	x	Existing	$300,000	Henderson Public Works				x	6,000	2-3 Years
H08	11	M	Retention basin along White Avenue	x				Both	$750,000	Henderson Public Works	x	x	x		5,000	3-5 Years
H09	10	H	Generator for water wells-pump		x	x	x	Existing	$15,000	Henderson Public Works	x	x			10,000	
H10	10	M	Drainage/culvert improvement Old Jackson Road at railroad	x				Existing	$100,000	Henderson Roads Department	x	x	x		6,000	2-3 Years
H11	10	M	Culvert improvement Steed Street west of Hill Avenue	x				Existing	$50,000	Henderson Roads Department	x	x	x		5,000	2-3 Years
H12	10	M	Buy out properties along new flood prone properties	x				Both	$100,000	Henderson City Hall	x				28	2-3 Years

Enville																
Project Number	Priority Score	Jurisdiction Priority Rank (High, Medium, Low)	Action/Project	Hazard Mitigated				Addresses New or Existing Buildings/ Infrastructure	Estimated Cost	Responsible Agency	Funding Sources				Population Affected	Timeframe
				Flood	Severe Storm	Winter Storm	Earthquake				HMGP	PDM	FMA	Local		
E01	15	H	Culvert project 22A South and Enville Road	x				Existing	$40,000	Enville Mayor	x	x	x		200	2-3 Years
E02	13	H	Fire station back up generator	x	x	x	x	Existing	$20,000	Enville Fire Department	x	x			200	2-3 Years

Milledgeville															
Project Number	Priority Score	Jurisdiction Priority Rank (High, Medium, Low)	Action/Project	Hazard Mitigated				Addresses New or Existing Buildings/ Infrastructure	Estimated Cost	Responsible Agency	Funding Sources				Population Affected	Timeframe
				Flood	Severe Storm	Winter Storm	Earthquake				HMGP	PDM	FMA	Local		
M01	15	H	Public awareness natural hazards	x	x	x	x	Both	$500	Milledgeville Mayors Office				x	235	Annuall y
M02	13	H	Develop plan for identifying storm shelters in residential areas and utilities to residents		x			Both	$15,000	Milledgeville Fire Department				x	235	1 Year

Chester County Schools															
Project Number	Priority Score	Jurisdiction Priority Rank (High, Medium, Low)	Action/Project	Hazard Mitigated				Addresses New or Existing Buildings/ Infrastructure	Estimated Cost	Responsible Agency	Funding Sources				Population Affected	Timeframe
				Flood	Severe Storm	Winter Storm	Earthquake				HMGP	PDM	FMA	Local		
S01	13	H	Back up generator at Chester County High School	x	x	x	x	Existing	$200,000	Chester County Schools	x	x			4,000	2-3 Years
S02	8	H	Tornado safe space Chester County High School		x			Existing	$100,000	Chester County Schools	x	x			4,000	2-3 Years
S03	8	H	Tornado safe space Chester County Junior High School		x			Existing	$100,000	Chester County Schools	x	x			4,000	2-3 Years
S04	8	H	Tornado safe space East Chester Elementary		x			Existing	$100,000	Chester County Schools	x	x			4,000	2-3 Years
S05	8	H	Tornado safe space West Chester Elementary		x			Existing	$100,000	Chester County Schools	x	x			4,000	2-3 Years

S06	8	H	Tornado safe space Jack's Creek Elementary		x			Existing	$100,000	Chester County Schools	x	x			4,000	2-3 Years

Project List Update

The following chart shows the status of each approach/project from the previous plan:

Action/Project	Project Status
Replace / Retrofit Bridges	Deleted
Create Safe Space within Schools with Back Up Generator	Carried forward: Projects S01-S06
Ensure Sufficient Size Culvert to Meet Drainage Requirements	Carried forward: Projects C07, H02, H04, H06, H10-12, & E01
Conduct Hazard Mitigation Public Awareness Campaign for All Hazards	Carried forward: C10, H03, & M01
Construct Community Safe Space with Back Up Generator	Carried forward: C01-C06
Encourage Adoption of Most Current Building Codes	Deleted
Maintain Right of Ways	Carried forward: H05
Seismically Retrofit Communications Center and Fire Department	Deleted
Build Retention Pond on Highway 22A near Lancaster Road	Deleted
Retrofit County Courthouse	Deleted
Seismic Retrofit of School Buildings	Deleted
Elevate Roadways Prone to Flooding	Deleted
Seismically Retrofit City Hall and Fire Department	Deleted
Raise Berm of Lagoon at Sewage Treatment Plant	Completed

The following definitions apply to the status as listed in the above chart:

- Completed-All work on the project complete
- Carried Forward-Project was not funded from the previous plan, and has been added to the new project list
- Deleted-Project has been deemed unqualified, unnecessary, or infeasible

In addition to the completed project(s), Chester County has also added a number of new projects to the list as part of the 2016 hazard mitigation plan update.

National Flood Insurance Program Compliance

The National Flood Insurance Program (NFIP) is a pre-disaster flood hazard mitigation and insurance protection program which has reduced the increasing cost of disasters. The intent of the program is to: require new and substantially improved structures be designed and constructed

to minimize or eliminate future flood damage; provide floodplain residents and business owners with financial insurance assistance in the form of insurance after floods; and it transfers most of the cost of private property flood losses from the taxpayers to floodplain property owners through flood insurance premiums. Participation in the NFIP is based on an agreement between communities and FEMA.

Currently, all jurisdictions are NFIP participants. FEMA has listed these jurisdictions to have a current effective map date as of May 2009. Below are two charts that give an overview of NFIP policy and loss data for Chester County.

NFIP Policy Data for Chester County			
Jurisdiction	**Policies In-Force**	**Insurance In-Force Whole $**	**Written Premium In-Force**
Chester County	5	$939,200	$4,183
Henderson	3	$625,000	$4,477
Enville	1	$280,000	$353
Milledgeville	0	N/A	N/A

Policies In-force: number of NFIP flood insurance policies
Insurance In-force whole $: value of building and contents insured by the NFIP
Written Premium In-force: total premiums paid for NFIP insurance policies

NFIP Loss Data for Chester County		
Jurisdiction	**Total Losses**	**Total Payments**
Chester County	2	$41,848
Henderson	1	$28,148
Enville	0	N/A
Milledgeville	0	N/A

Total Losses: number of flood insurance claims filled by policyholders
Closed Losses: number of flood insurance claims paid to policyholders
CWOP Losses: claims that were "closed without payment"
Total Payments: total dollars paid to policyholders

Repetitive Loss/Severe Repetitive Loss Properties				
Location	**Dwelling Type**	**Flood Zone**	**Total Losses**	**Total Payout**
No RL/SRL Properties				

To continue compliance with the NFIP, the jurisdictions have identified, analyzed, and prioritized three mitigation strategies to stay active with the program.

1. Continue to evaluate improved standards that are proven to reduce flood damage.

2. Maintaining supplies of FEMA/NFIP materials to help homeowners evaluate measures to reduce damage.

3. Maintaining a map of areas that flood frequently and prioritizing those areas for inspection immediately following heavy rains or flooding event.

Section 5: Plan Maintenance

Monitoring, Evaluating, and Updating

The Chester County Hazard Mitigation Committee is designated to monitor and evaluate the mitigation plan. This committee is chaired by Chester County Emergency Management Agency who leads the monitoring, evaluating, and updating process.

Monitoring of the previous mitigation plan, progress and projects occurred informally over the life-cycle of the previous plan.

Monitoring activities will involve Chester County Emergency Management Agency setting up a committee meeting to be held on a quarterly basis in conjunction with the Local Emergency Planning Committee meetings. Chester County Emergency Management Agency will prepare a brief annual report of the meeting's findings by addressing mitigation progress and shortfalls within the county.

The plan is to be evaluated annually and after any significant disaster causing human, infrastructure, and property losses. Following each annual informal evaluation of the plan by emergency management staff, any proposed revisions or recommendations will be brought before the Mitigation Committee to be incorporated into the plan. Potential updates to the plan will address changes to the hazard assessment, the repetitive loss list, the committee membership list, and the project priority list.

The plan will be formally updated every five-years in accordance to 44 CFR 201.6(d)3, which states that the plan shall be reviewed, revised, and resubmitted for approval within five-years to continue eligibility for hazard mitigation grant funding. For the five-year update, Chester County Emergency Management Agency will notify the jurisdictional governments and the Chester County Hazard Mitigation Committee approximately one year prior to the plan's expiration date. The review of the plan will include updating the planning process, the County profile, the hazard profiles, the risk assessment, the vulnerability assessment, the mitigation strategies, and the plan maintenance descriptions.

The five-year plan update will also include soliciting other interested persons/agencies to join the Mitigation Committee and a review of what has been accomplished in the past 5 years. The Chester County Hazard Mitigation Committee's goal is to have at least 5 meetings within this time span; dates, public notices, and objectives for these meetings will be determined by Chester County Emergency Management Agency.

Five months prior to the plan's expiration date, Chester County Emergency Management Agency will submit the revised plan to the Tennessee Emergency Management Agency for preliminary review. Upon approval by the state, TEMA will submit the updated plan to FEMA for review.

Once Chester County has attained the designation of the plan's approval pending adoption, each jurisdiction will adopt the plan through a resolution within a year.

Incorporation into Planning Cycle

In the previous planning cycle, Chester County and its jurisdictions/school districts did not have a systematic process for incorporating mitigation into other planning mechanisms, and instead left it up to individual entities and agencies to review and incorporate as necessary.

By incorporating the Chester County Hazard Mitigation Plan into the planning cycle, information contained in the mitigation plan can help fill-in missing gaps in existing documents, can contribute to already existing mitigation-based projects, and can create a strengthen stance of mitigation implementation and awareness within the county and its jurisdictions.

Some of the mechanisms that the Chester County Hazard Mitigation Plan could be incorporated into include:

- Chester County BEOP
- Chester County Schools Emergency Plans
- Chester County Highway Department Plan
- County & Jurisdictional Public Works Development Plans
- County & Jurisdictional Fire Department 5 Year Plans
- Jurisdictional Plans, SOP's, & SOG's
- Chester County School District Safety Plan

The process of incorporating the hazard mitigation plan into other plans will begin during the other plan's update cycles. All jurisdictions will first review the plans side-by-side to make applicable notes on how mitigation concepts and actions can be incorporated into the other plans. These recommendations will be submitted to the lead agencies of the other planning mechanisms for them to place relevant information within the documents.

Continued Public Participation

The Chester County Mitigation Committee will strive to involve the public in future mitigation activities. This will be accomplished by continuing to post Mitigation Committee Meeting dates in the local newspaper, by attempting to have a public mitigation meeting once a year, by providing public access to copies of the Chester County Hazard Mitigation Plan in the local emergency management office, and by soliciting other interested persons to participate in the mitigation planning process. By implementing these methods, the public will have an opportunity to comment on the plan during the update drafting stage and prior to plan approval.

Appendix 1

Attendance Sheet – Committee Meeting #1

Sign-In Sheet
Chester County Hazard Mitigation Meeting #1
12/10/2019

Name	Title	Department	Email Address	Phone Number
Johny Farris	Director	Chester Co EMA	jrfarris662@msn.com	731-608-1222
Jay Nance	District Coordinator	TEMA	jay.nance@tn.gov	731-234-4620
Brent Phillips	Planner	TEMA	brent.phillips@tn.gov	731-225-2823
Dave Karwell	Fire Chief	Chester Co. Fire	500ccfd@gmail.com	731-983-5570
John Malone	Foreman	Highway Dept.	johnmalone5646@charter.net	989-7311
Weland Alexander	Chief	Milledgeville	margiea@centurytel.net	439-6188
Glenn Bryan	Chief	Henderson Fire	gbryan2015@hotmail.com	7316080387
Carter Scales	Director Pub Works	City of Henderson	cscales@cityofhenderson.tn.us	731 608 6318
Darryl Green	Utility Director	City of Henderson	dgreen@hendersontn.gov	731-608-3738
Brent Beshires	Building Dept	City of Henderson	bbeshires@hendersontn.gov	731 608 0722

Page 1 of 1

Appendix 2

Attendance Sheet – Committee Meeting #2

Sign-In Sheet
Chester County Hazard Mitigation Meeting #2
1/14/2020

Name	Title	Department	Email Address	Phone Number
Tim Crowe	Asst. Chief	Henderson P.D	tcrowe@hendersontn.gov	731-983-5410
Johny Farris	EMA Dir.	Chester County	jrfarris1427@msn.com	731-989-5674
Dr. Steven Marise	Chester Co. Schools Safety Coordinator	Chester County Schools	steven.marise@chestercounty schools.org	615-892-9944
Cheryl Yarbro	District Coordinator	TEMA	Cheryl.yarbro@tn.gov	731-431-2455
David Harwell	Chester Co Fire Chief	Chester Co Fire	500ccfd@gmail.com	731-608-7313
John Malone	County Road Foreman	Highway Dept.	johnmalone5646@[illegible]	731-608-1113
Gary Davidson	Chief of Police	Henderson Police Dept	gdavidson@hendersontn.gov	731-608-6416
Brent Beshires	Building Dept.	City of Henderson	bbeshires@hendersontn.gov	731 983 5011
Leland Alexander	Fire Chief	Town of Milledgeville	margiea@centurylink.net	731-439-1188
Carter Scales	Public work Direct	City of Henderson	Cscales@ci.henderson.tn.us	731-879-6267
Glenn Bryan	Fire Dept	City of Henderson	Gbryan2015@Hotmail	7316080387
Brent Phillips	TEMA Planner	TEMA	brent.phillips@tn.gov	731-205-2823

Page 1 of 1

Appendix 3

Attendance Sheet – Committee Meeting #3 (Enville)

Sign-In Sheet
Chester County Hazard Mitigation Meeting #3
1/22/2020

Name	Title	Department	Email Address	Phone Number
Johnny Harris	Chester EMA Director	EMA	jlharris662@msn.com	731-608-1222
Kaye Ritter	Aldermen	Enville	mrjohnston506@hotmail	731-926-0723
Brent Phillips	Planner	TEMA	brent.phillips@tn.gov	731-225-2823

Page 1 of 1

Appendix 4

Notice/Meeting Minutes/Letters

CHESTER COUNTY INDEPENDENT • Thursday, December 5, 2019 Page 3-A

The point of print

DENNIS RICHARDSON

While a large number of people seem to forever be glued to their cell phones for just about everything, and wouldn't leave home without it, I prefer to read what I want to know in a larger format.

An Ipad? Well, those are nice, so are tablets. But why not open the laptop instead? But I prefer even larger than that. And handier. And it doesn't use up its battery life or require a wifi signal.

Maybe I am just an old "fuddy duddy" but I like being able to pick up something in print. Not only is it larger but there is just so much of the computer I can take. Headaches begin to set in and distractions occur like notifications that it is my turn in the computer games. Also, who knows what kind of identity thieves and ransom ware pirates are lurking?

Alexa is enough of the outside world listening in as far as I am concerned. Siri, too. I joked the other day when company was over that "I hope Alexa is not listening in". Guess who piped right in? Alexa muttered something like "I do not listen unless asked to" or something like that. I was so shocked at the comment that I missed part of it.

I like to read my news from a newspaper Or a magazine.

It seems not only more credible, coming from local journalists who take pride in their accuracy and fact-checking, but also the ads stay right there on the page instead of popping up in my face.

There is something about holding printed news while reading.

I don't know about others, but my brain seems to register and remember what is in print more than what is on the computer screen (or phone screen if I was to look it up there).

I do not need a password to get into the news in the printed version of the newspaper. I like that because I have enough passwords to remember for banking and vendors websites where I go to view invoices. More often than not, every time I am asked for a password to set up an online access it must be in a different format. And I am not allowed to use one that I have used before. Try too many times with the wrong password and I get locked out which means further delays.

No one needs a password to pick up that newspaper on the coffee table. Studies show that multiple people read that newspaper. They do not even need to log in.

It seems many news items on the Internet feature a teaser lead-in to pique readers' curiosity enough so that they click on the link to read more. Website owners then use those numbers of clicks to lead advertisers to believe a lot of people are seeing their ad message. We use digital marketing, too. It is one of those "necessary evils" today.

It may be just me but the pop up are annoying and distracting, making it hard to focus on the real point.

Life is a cycle and history often repeats itself which leads me to believe there is a strong future in print journalism.

What do you think? We'd love to read your phone encounters.

Samantha Bennett appeard in Chester County General Sessions Court last week with her attorney. Judge Larry McKenzie lowered her bond from $1 million to $100,000.

Bennett waived to Grand Jury

In the State of Tenn. against Samantha Bennett, Bennett was bound over to the Chester County Grand Jury, and is scheduled to next appear for arraignment Feb. 26, 2020.

During an ongoing drug investigation, Bennett, 28, of 295 Ollie Lane, was arrested Oct. 4 and charged with possession of a schedule VI controlled substance, possession of a schedule I controlled substance and possession of a schedule II controlled substance.

Bond was originally set at one million, and has been reduced to $100,000. She continues to be held in the Chester County Jail.

NOTICE OF JOINT PLANNING MEETING OF THE CITY OF HENDERSON BOARD OF ALDERMEN AND THE CHESTER COUNTY COMMISSION

The City of Henderson Board of Mayor and Aldermen and the Chester County Commission will meet for a Joint Planning Meeting to receive information and discuss a proposed Tax Increment Financing (TIF) Project. The meeting will take place in the Council Chamber of Henderson City Hall at 121 Crook Ave on Tuesday, December 17, 2019 at 6:00 P.M. No votes will take place at this meeting. The Public is invited to attend.

Robert W. King
Mayor
City of Henderson

Barry Hutcherson
Mayor
Chester County

It is the policy of the City of Henderson and Chester County not to discriminate on the basis of race, color, national origin, age, sex or disability in its practices, programs, services or activities.

IMPORTANT INFORMATION ABOUT YOUR SPECTRUM TV LINEUP:

Communities Served:
City of Henderson and County of Chester, TN.

Effective on or after January 1, 2020, WMC-Grit will be replaced by WMC-Circle on Basic TV channel 184.

For a complete channel lineup, visit Spectrum.com/Channels.

To view this notice online, visit Spectrum.net/ProgrammingNotices.

Chester County Emergency Management Agency Hazard Mitigation Planning Meeting

There will be a meeting of the Chester County Local Emergency Planning Committee on Thursday, December 10th at 5:00 pm in the Henderson City Hall Conference Room located on the first floor to discuss the Chester County Hazardous Mitigation Plan. The Hazard Mitigation Plan addresses natural hazards such as flooding, tornados, winter storms and other events that may affect Chester County and the efforts to mitigate the impact of those events on the people of Chester County. The meeting is open to the public.

STATEWIDES

DENTAL INSURANCE. Call Physicians Mutual Insurance Company for details. NOT just a discount plan, REAL coverage for 350 procedures. 844-278-8285 or http://www.dental50plus.com/tnpress Ad# 6118 (TnScan)

RECRUITING HEADACHES? WE CAN Help! Advertise your job opening in this newspaper + 97 newspapers across the state - One Call/Email for All! Contact our classified dept. or email networks@tnpress.com (TnScan)

NEW STARTING BASE PAY - .50 cpm w/ option to make .60 cpm for Class A CDL Flatbed Drivers, Excellent Benefits, Home Weekends, Call 800-648-9915 or www.boydandsons.com (TnScan)

NEED YOUR CDL? We do CDL Training, testing, Job placement. Company paid training available.Training at 119 EL Morgan Dr. Jackson, TN or 6711 Reese Road, Memphis, TN. Call 800-423-8820 Or visit www.drive-train.org (TnScan)

Eliminate gutter cleaning forever! LeafFilter, the most advanced debris-blocking gutter protection. Schedule a FREE LeafFilter estimate today. 15% off and 0% financing for those who qualify. PLUS Senior & Military Discounts. Call 1-855-389-3904 (TnScan)

Looking for self storage units? We have them! Self Storage offers clean and affordable storage to fit any need. Reserve today! 1-855-897-3423 (TnScan)

Frontier Communications Internet Bundles. Serious Speed! Serious Value! Broadband Max - $19.99/mo or Broadband Ultra - $67.97/mo. Both Include FREE Wi Fi Router. CALL For Details! - 1-877-890-9544 (TnScan)

HughesNet Satellite Internet - 25 mbps starting at $49.99/mo! Get More Data FREE Off-Peak Data. FAST download speeds. WiFi built in! FREE Standard Installation for lease customers! Limited Time, Call 1-844-233-4950 (TnScan)

Earthlink High Speed Internet. As Low As $14.95/month (for the first 3 months.) Reliable High Speed Fiber Optic Technology. Stream Videos, Music and More! Call Earthlink Today 1-888-337-9611 (TnScan)

A PLACE FOR MOM has helped over a million families find senior living. Our trusted, local advisors help find solutions to your unique needs at no cost to you. 1-855-694-6715 (TnScan)

YOUR LOW COST ADVERTISING Solution! One call & your 25 word ad will appear in 98 Tennessee newspapers for $275/wk or 26 West TN newspapers for $100/wk. Call this newspaper's classified advertising dept. or go to www.tnpress.com/newspaper-networks (TnScan)

GET THE WORD OUT about your next auction! Save Time & $$$. One Call for All. Your ad can appear in this newspaper + 97 other TN newspapers. For more info, contact this newspaper's classified dept. or call Becky Moats 931-624-8916. (TnScan)

DISH Network $59.99 For 190 Channels! Add High Speed Internet for ONLY $19.99/month. Call Today for $100 Gift Card! Best Value & Technology. FREE Installation. Call 1-844-274-6074 (some restrictions apply) (TnScan)

Get NFL Sunday Ticket FREE w/ DIRECTV Choice All-Included Package. $59.99/month for 12 months. 185 Channels PLUS Thousands of Shows/Movies On Demand. FREE Genie HD DVR Upgrade. Call 1-844-230-4803 or satellitedealnow.com/TN (TnScan)

Have you or your child suffered serious LUNG ISSUES from JUULing or Vaping? Let our attorneys fight for you! Get the justice you deserve! Call 877-460-0208 (TnScan)

Full Spectrum, CBD Rich Hemp Oil. Known to help reduce stress & anxiety, improve sleep, manage chronic pain. Lab Tested. USA Grown not Overseas. 100% Money Back Guarantee. Save Over 33% CALL NOW: 1-844-244-6152 (TnScan)

Attention Viagra users: Generic 100 mg blue pills or Generic 20 mg yellow pills. Get 45 plus 5 free $99 + S/H. Guaranteed, no prescription necessary. Call 866-569-5390 (TnScan)

DENTAL INSURANCE. Call Physicians Mutual Insurance Company for details. NOT just a discount plan, REAL coverage for 350 procedures. 844-278-8285 or http://www.dental50plus.com/tnpress Ad# 6118 (TnScan)

RECRUITING HEADACHES? WE CAN Help! Advertise your job opening in this newspaper + 97 newspapers across the state - One Call/Email for All! Contact our classified dept. or email networks@tnpress.com (TnScan)

NEW STARTING BASE PAY - .50 cpm w/ option to make .60 cpm for Class A CDL Flatbed Drivers, Excellent Benefits, Home Weekends, Call 800-648-9915 or www.boydandsons.com (TnScan)

NEED YOUR CDL? We do CDL Training, testing, Job placement. Company paid training available.Training at 119 EL Morgan Dr. Jackson, TN or 6711 Reese Road, Memphis, TN. Call 800-423-8820 Or visit www.drive-train.org (TnScan)

Public Notices

NOTICE OF FORECLOSURE SALE
STATE OF TENNESSEE, CHESTER COUNTY

WHEREAS, Thomas Ray Nelson and Brenda Davis executed a Deed of Trust to Mortgage Electronic Registration Systems, Inc., As Beneficiary, As Nominee For First Community Mortgage, Inc., Lender and Megan K. Trott, Trustee(s), which was dated January 5, 2018, and recorded on January 5, 2018 in Book 429, Page 159, in Chester County, Tennessee Register of Deeds.

WHEREAS, default having been made in the payment of the debt(s) and obligation(s) thereby secured by the said Deed of Trust and the current holder of said Deed of Trust, Tennessee Housing Development Agency, (the "Holder"), appointed the undersigned, Brock & Scott, PLLC, as Substitute Trustee, with all the rights, powers and privileges of the original Trustee named in said Deed of Trust; and

NOW, THEREFORE, notice is hereby given that the entire indebtedness has been declared due and payable as provided in said Deed of Trust by the Holder, and that as agent for the undersigned, Brock & Scott, PLLC,Substitute Trustee, by virtue of the power and authority vested in it, will on February 5, 2020, at 12:00PM at the usual and customary location at the Chester CountyCourthouse, Henderson, Tennessee, proceed to sell at public outcry to the highest and best bidder for cash, the following described property situated in Chester County, Tennessee, to wit:

BEING Lot 4 of the Scotty Kinchen Subdivision, Section 2 as shown on plat of record in Plat Cabinet Section 5, page 104, in the Register's Office of Chester County, Tennessee and reference is hereby made to said plat cabinet and page where recorded for a more complete and accurate description of said Lot 4 of said subdivision, and the description, location, and designation as there given and shown is incorporated herein by this reference thereto as fully and to the same extent as if copied in full herein, containing 0.67 acres as surveyed by Superior Land Surveying, Inc., R.L.S. No. 2148, on September 15, 2005. Said legal description is the same description as contained in the previous deed of record.

This is the identical real estate conveyed to Thomas Ray Nelson and wife, Brenda Davis from Denise Whitman (now Robbins) by Warranty Deed dated January 5, 2018, of record in the Register's Office of Chester County, Tennessee, in Record Book 429, page 157.

Subject to any and all setbacks, easements, restrictions and all other matters as shown on the Plat of this property of record in the Register's Office of Chester County, Tennessee in Plat Cabinet, Section 5, page 104.

Parcel ID Number: 033 139 07 000

Address/Description: 996 Hill Ave, Henderson, TN 38340.

Current Owner(s): Thomas Ray Nelson And Brenda Davis.

Other Interested Party(ies): TENNESSEE HOUSING DEVELOPMENT AGENCY.

The sale of the property described above shall be subject to all matters shown on any recorded plat; any and all liens against said property for unpaid property taxes; any restrictive covenants, easements or set-back lines that may be applicable; any prior liens or encumbrances as well as any priority created by a fixture filing; a deed of trust; and any matter than an accurate survey of the premises might disclose; and

All right and equity of redemption, statutory or otherwise, homestead, and dower are expressly waived in said Deed of Trust, and the title is believed to be good, but the undersigned will sell and convey only as Substitute Trustee. The right is reserved to adjourn the day of the sale to another day, time, and place certain without further publication, upon announcement at the time and place for the sale set forth above.

This office is attempting to collect a debt. Any information obtained will be used for that purpose.

Brock & Scott, PLLC,
Substitute Trustee
c/o Tennessee
Foreclosure Department
4360 Chamblee
Dunwoody Road, Ste 310
Atlanta, GA 30341
PH: 404-789-2661 FX:
404-294-0919
File No.: 19-13849 FC01

NOTICE

CHESTER COUNTY, TENNESSEE
PLAINTIFF,

Vs.

DELINQUENT TAXPAYERS AS SHOWN ON THE 2013, 2014, 2015, 2016 & 2017 REAL (PERSONAL) PROPERTY DELINQUENT TAX RECORDS OF CHESTER COUNTY, TN, AS MORE FULLY SET OUT IN EXHIBIT A ATTACHED HERETO.
Defendants

IN THE CHANCERY COURT OF CHESTER COUNTY, TENNESSEE
DOCKET NOS. 2015-CV-848, 2016-CV-921, 2017-CV-1024, 2018-CV-1090 & 2019-CV-1153

In this action, it appearing to the satisfaction of the Chancery Court from the Plaintiff's Attorney's Affidavit and statements, which are sworn to, that the Defendants, the delinquent taxpayers' current whereabouts and current address cannot be found or otherwise ascertained so that ordinary process of law cannot be served; it is, therefore, ordered that publication be made in the Chester Co. Independent, a newspaper published in Chester County, TN, for four consecutive weeks, commanding said defendants to serve upon John E. Talbott, Plaintiff's Attorney, whose address is 117 E. Main St., Henderson, TN 38340, a copy of answer to the respective Complaints on or before February 29, 2020, also file an answer to the said Complaints with the Clerk and Master at his office in Henderson, TN, according to law. If you fail to do so judgement by default will be taken against you for the relief demanded in the respective Complaints.

This the 2nd day of January, 2020.

Keith Frye, Clerk and Master

John E. Talbott, Attorney for Plaintiff

EXHIBIT A

Name	Property Address	Map & Parcel No.	BaseTax
2013			
Joey's Roofing Siding & Gutter	Fryes Point Road 295	05-010-010-021.03-P-000	$341.00
Kinchen's Plumbing Service	North Avenue 541	06-033L-A-033K-013.00-P-000	$65.00
Morrison's Lawn Service	Ashcraft Cove 75	04-025-025-002.04-P-000	$11.00
2014			
Joey's Roofing Siding & Gutter	Fryes Point Road 295	05-010-010-021.03-P-000	$358.00
Kinchen's Plumbing Service	North Avenue 541	06-033L-A-033K-013.00-P-000	$68.00
Morrison's Lawn Service	Ashcraft Cove 75	04-025-025-002.04-P-000	$12.00
2015			
RI Roofing	Main Street E 580	06-034-034-052.00-P-005	$286.00
Forty Five Tire & Service Center	US Hwy 45 S 748	06-046-046-102.00-P-001	$18.00

Public Notice

Chester County Emergency Management Agency Hazard Mitigation Planning Meeting

There will be a meeting of the Chester County Local Emergency Planning Committee on Tuesday, January 14th, 2020 at 5:00 pm in the Henderson City Hall Conference Room located on the first floor to discuss the Chester County Hazardous Mitigation Plan. The Hazard Mitigation Plan addresses natural hazards such as flooding, tornados, winter storms and other events that may affect Chester County and the efforts to mitigate the impact of those events on the people of Chester County. The meeting is open to the public.

Public Notices

NOTICE OF FORECLOSURE SALE

STATE OF TENNESSEE, CHESTER COUNTY

WHEREAS, Larry D. Riley executed a Deed of Trust to United States of America, acting through the Rural Housing Service or successor agency, United States Department of Agriculture, Lender and David Seivers, Trustee(s), which was dated August 6, 1996, and recorded on August 7, 1996 in Book 147, Page 106, in Chester County, Tennessee Register of Deeds.

WHEREAS, default having been made in the payment of the debt(s) and obligation(s) thereby secured by the said Deed of Trust and the current holder of said Deed of Trust, United States of America, acting through the Rural Housing Service or Successor Agency, United States Department of Agriculture, (the "Holder"), appointed the undersigned, Brock & Scott, PLLC, as Substitute Trustee, with all the rights, powers and privileges of the original Trustee named in said Deed of Trust; and

NOW, THEREFORE, notice is hereby given that the entire indebtedness has been declared due and payable as provided in said Deed of Trust by the Holder, and that as agent for the undersigned, Brock & Scott, PLLC,Substitute Trustee, by virtue of the power and authority vested in it, will on January 15, 2020, at 12:00PM at the usual and customary location at the Chester CountyCourthouse, Henderson, Tennessee, proceed to sell at public outcry to the highest and best bidder for cash, the following described property situated in Chester County, Tennessee, to wit:

BEGINNING at a stake on the south margin of Massyville Robinson Road, the northeast corner of Ferguson 10.5 acre, see Deed Book 76, page 356, also a northeast corner of Kings; runs thence south 4° west 227.0 feet with Kings; thence north 65° west 209.0 feet, with Ferguson residue; thence north 4° east 227.0 feet, with said Ferguson residue, to Massyville-Robinson Road; thence, with south margin of said road, south 65° east 209.0 feet, with said Massyville-Robinson Road to the point of beginning, containing 1 acre.

This is the identical real estate conveyed to Larry D. Riley from Ralph Ferguson and James H. Ferguson by Warranty Deed dated August 6, 1996, of record in the Register's Office of Chester County, Tennessee, in Record Book 147, page 104.

Parcel ID Number: 092 01112 00012092

Address/Description: 220 Robertson Road, Bethel Springs, TN 38315.

Current Owner(s): Larry D. Riley and Sherry Ann Riley.

Other Interested Party(ies): Tennessee Housing Development Agency.

The sale of the property described above shall be subject to all matters shown on any recorded plat; any and all liens against said property for unpaid property taxes; any restrictive covenants, easements or set-back lines that may be applicable; any prior liens or encumbrances as well as any priority created by a fixture filing; a deed of trust; and any matter than an accurate survey of the premises might disclose; and

All right and equity of redemption, statutory or otherwise, homestead, and dower are expressly waived in said Deed of Trust, and the title is believed to be good, but the undersigned will sell and convey only as Substitute Trustee. The right is reserved to adjourn the day of the sale to another day, time, and place certain without further publication, upon announcement at the time and place for the sale set forth above.

This office is attempting to collect a debt. Any information obtained will be used for that purpose.

Brock & Scott, PLLC,
Substitute Trustee
c/o Tennessee Foreclosure Department
4360 Chamblee Dunwoody Road, Ste 310
Atlanta, GA 30341
PH: 404-789-2661 FX: 404-294-0919
File No.: 19-14155 FC01

NOTICE TO FURNISHERS OF LABOR AND MATERIALS TO:
Sweeping Corp. of America, Inc.
PROJECT NO.: 98049-4160-04, 98049-4157-04
CONTRACT NO.: CNR294
COUNTY: Chester

The Tennessee Department of Transportation is about to make final settlement with the contractor for construction of the above numbered project. All persons wishing to file claims pursuant to Section 54-5-122, T.C.A. must file same with the Director of Construction, Tennessee Department of Transportation, Suite 700 James K. Polk Bldg., Nashville, Tennessee 37243-0326, on or before 2/7/2020.

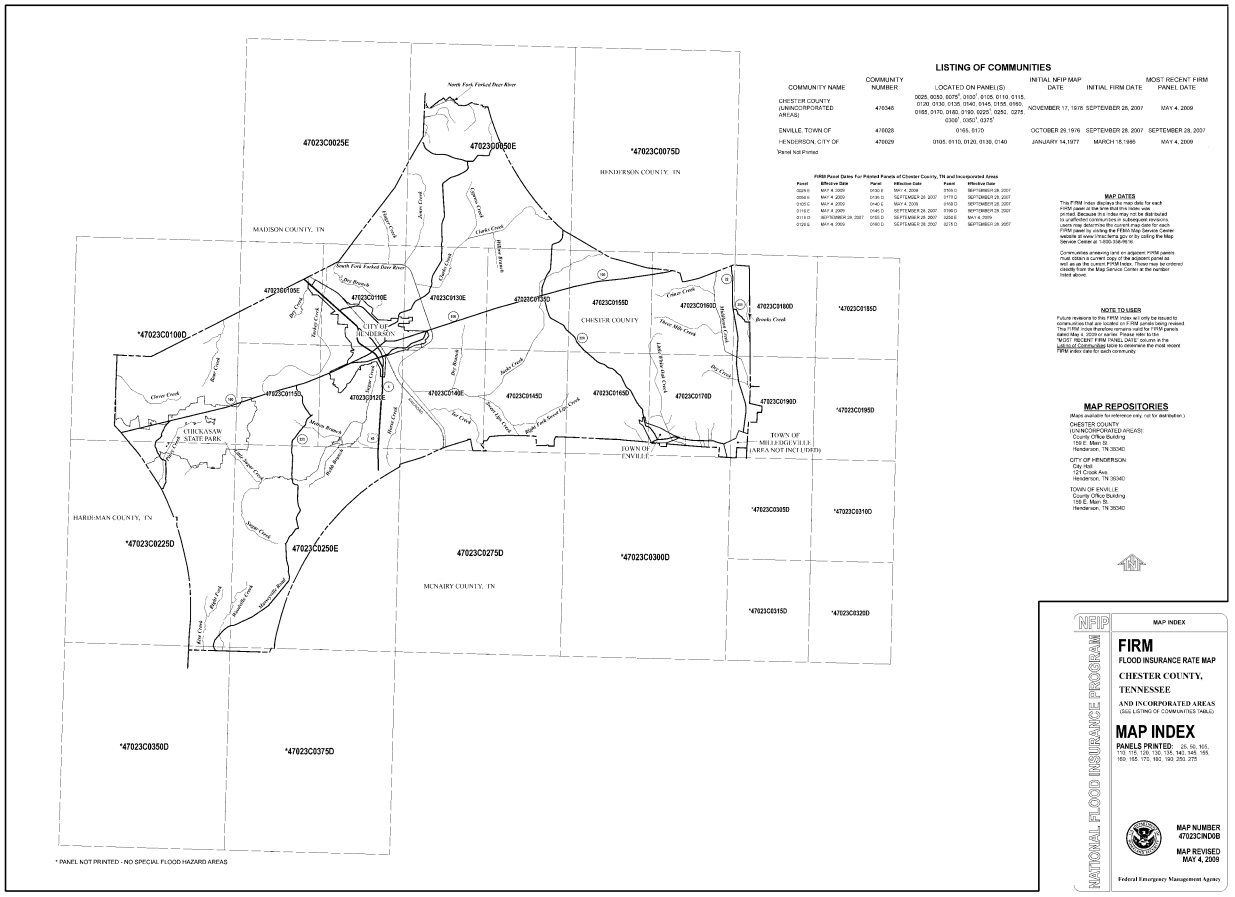
Public Notice

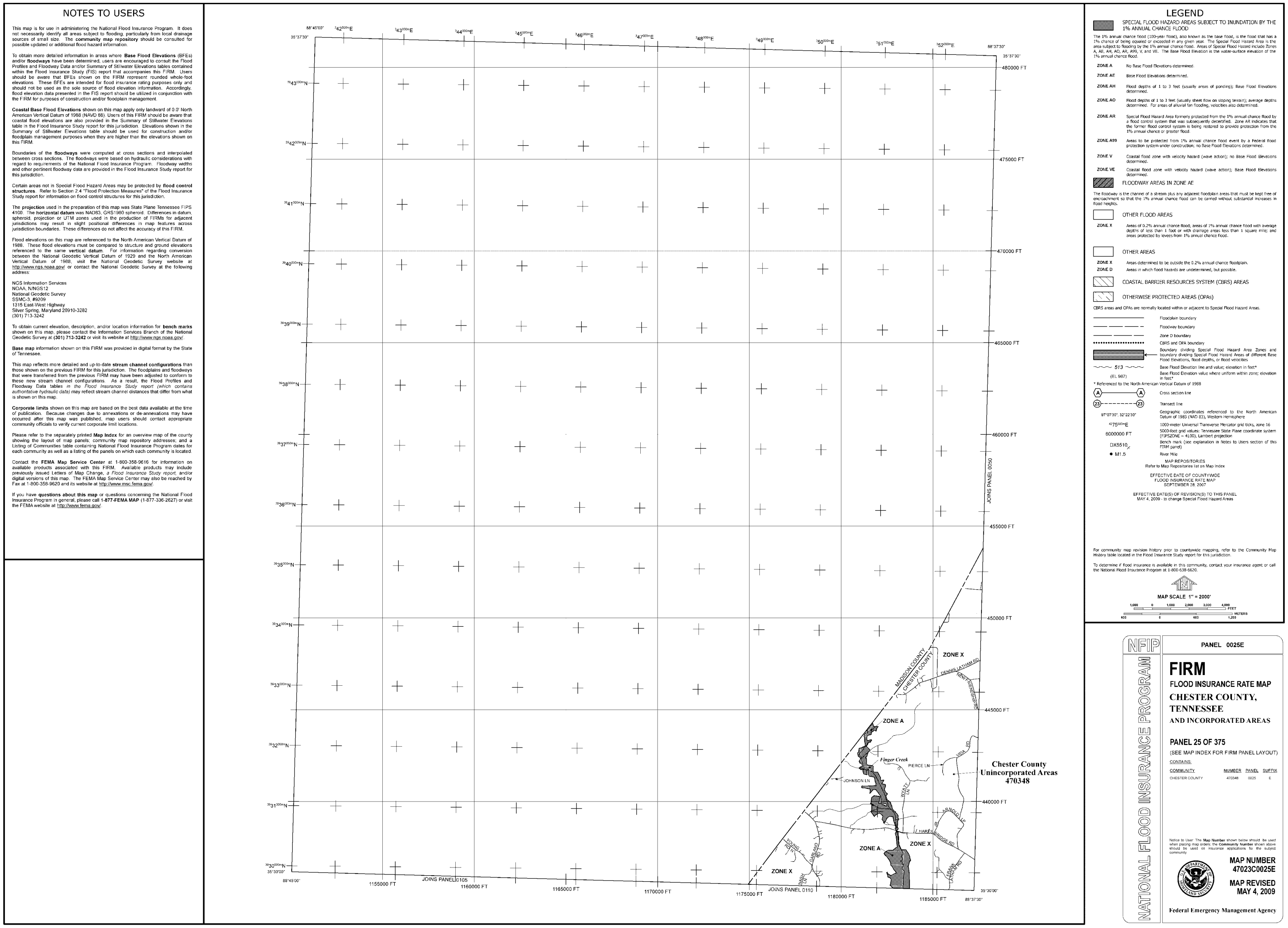
Chester County Emergency Management Agency Hazard Mitigation Planning Meeting

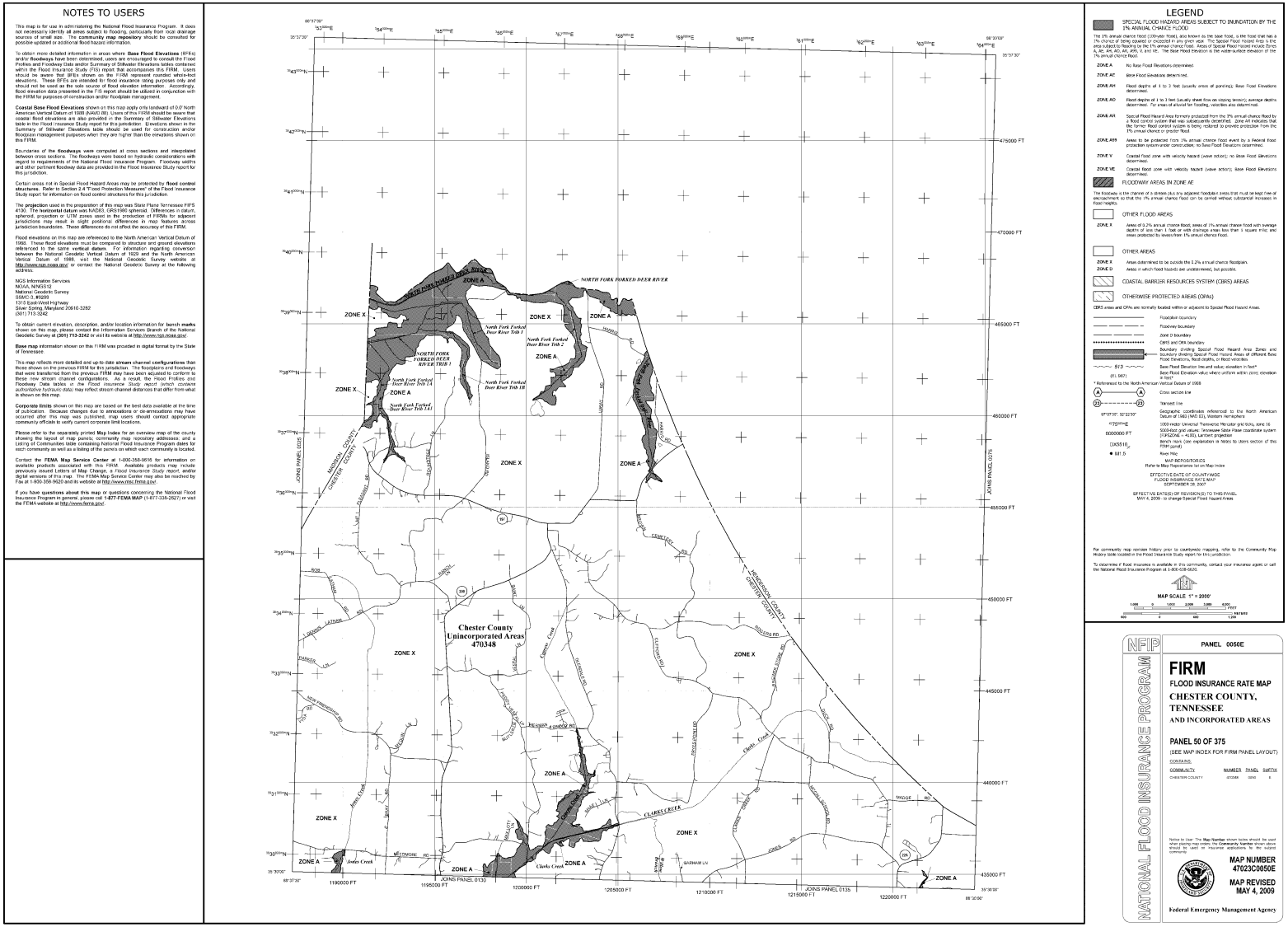
There will be a meeting of the Chester County Local Emergency Planning Committee on Tuesday, January 14th, 2020 at 5:00 pm in the Henderson City Hall Conference Room located on the first floor to discuss the Chester County Hazardous Mitigation Plan. The Hazard Mitigation Plan addresses natural hazards such as flooding, tornados, winter storms and other events that may affect Chester County and the efforts to mitigate the impact of those events on the people of Chester County. The meeting is open to the public.

Appendix 5

Flood Insurance Rate Maps for Chester County




NOTES TO USERS
LEGEND
ZONE X
ZONE A
Chester County
Unincorporated Areas
470348
JOINS PANEL 0105
JOINS PANEL 0110
JOINS PANEL 0050
NATIONAL FLOOD INSURANCE PROGRAM
NFIP
PANEL 0025E
FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY,
TENNESSEE
AND INCORPORATED AREAS
PANEL 25 OF 375
MAP NUMBER
47023C0025E
MAP REVISED
MAY 4, 2009
Federal Emergency Management Agency



NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was State Plane Tennessee FIPS 4100. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS13
National Geodetic Survey
SSMC-3, #9209
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was provided in digital format by the State of Tennessee.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to **annexations** or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.

Chester County Unincorporated Areas 470348

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A — No Base Flood Elevations determined.
ZONE AE — Base Flood Elevations determined.
ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 — Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*
- * Referenced to the North American Vertical Datum of 1988
- A — A — Cross section line
- 23 — 23 — Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 1000-meter Universal Transverse Mercator grid ticks, zone 16
- 6000000 FT — 5000-foot grid values: Tennessee State Plane coordinate system (FIPSZONE = 4100), Lambert projection
- DX510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 29, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
MAY 4, 2009 - to change Special Flood Hazard Areas

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0050E

FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 50 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

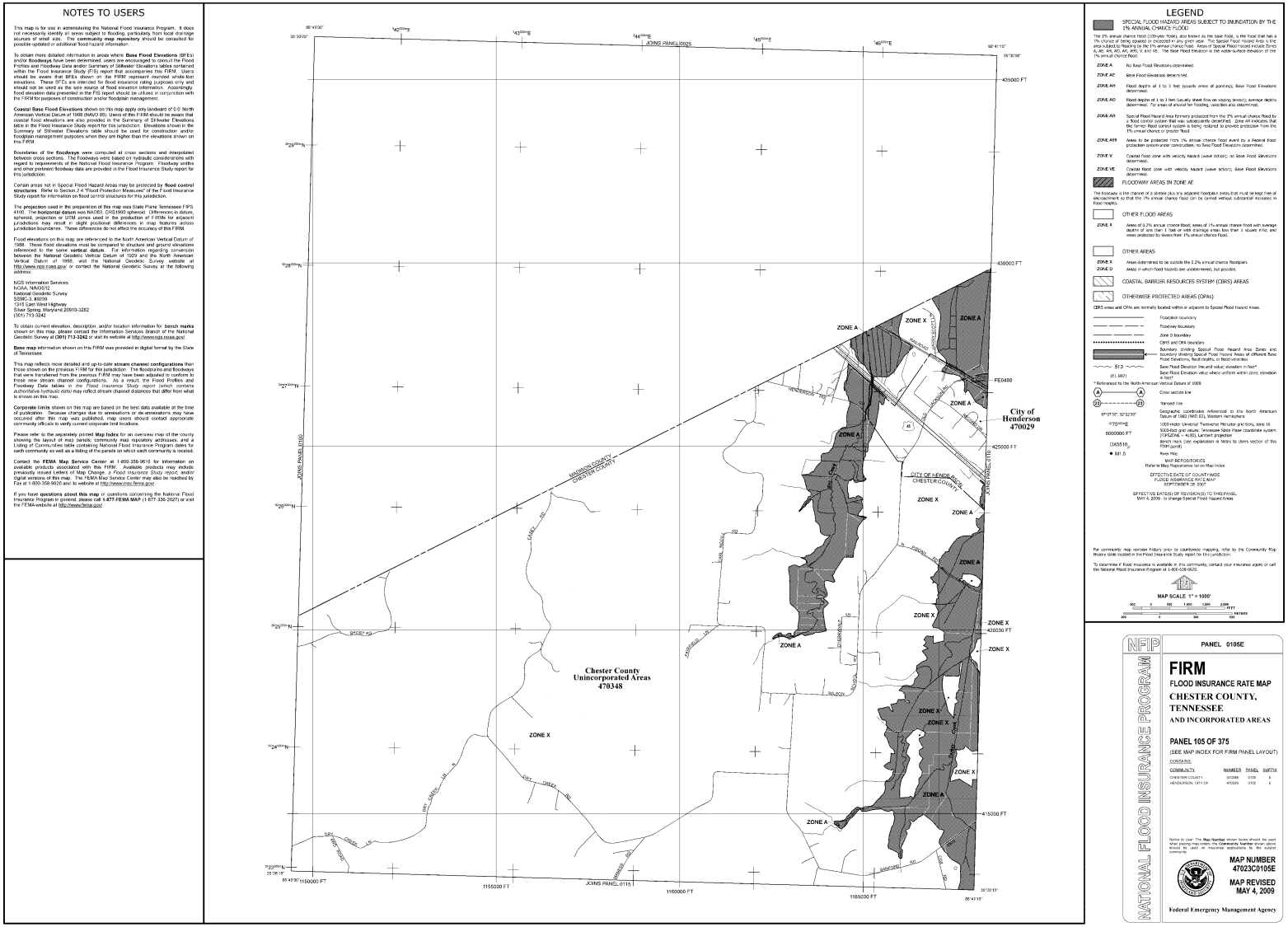
COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0050	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0050E

MAP REVISED
MAY 4, 2009

Federal Emergency Management Agency



NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0 North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was State Plane Tennessee FIPS 4100. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9259
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was provided in digital format by the State of Tennessee.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A — No Base Flood Elevations determined.
ZONE AE — Base Flood Elevations determined.
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ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 — Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988
A — A — Cross section line
23 — 23 — Transect line
97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
1000-meter Universal Transverse Mercator grid ticks, zone 16
6000000 FT — 5000-foot grid values: Tennessee State Plane coordinate system (FIPSZONE = 4100), Lambert projection
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 28, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
MAY 4, 2009 - to change Special Flood Hazard Areas

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0105E

FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 105 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

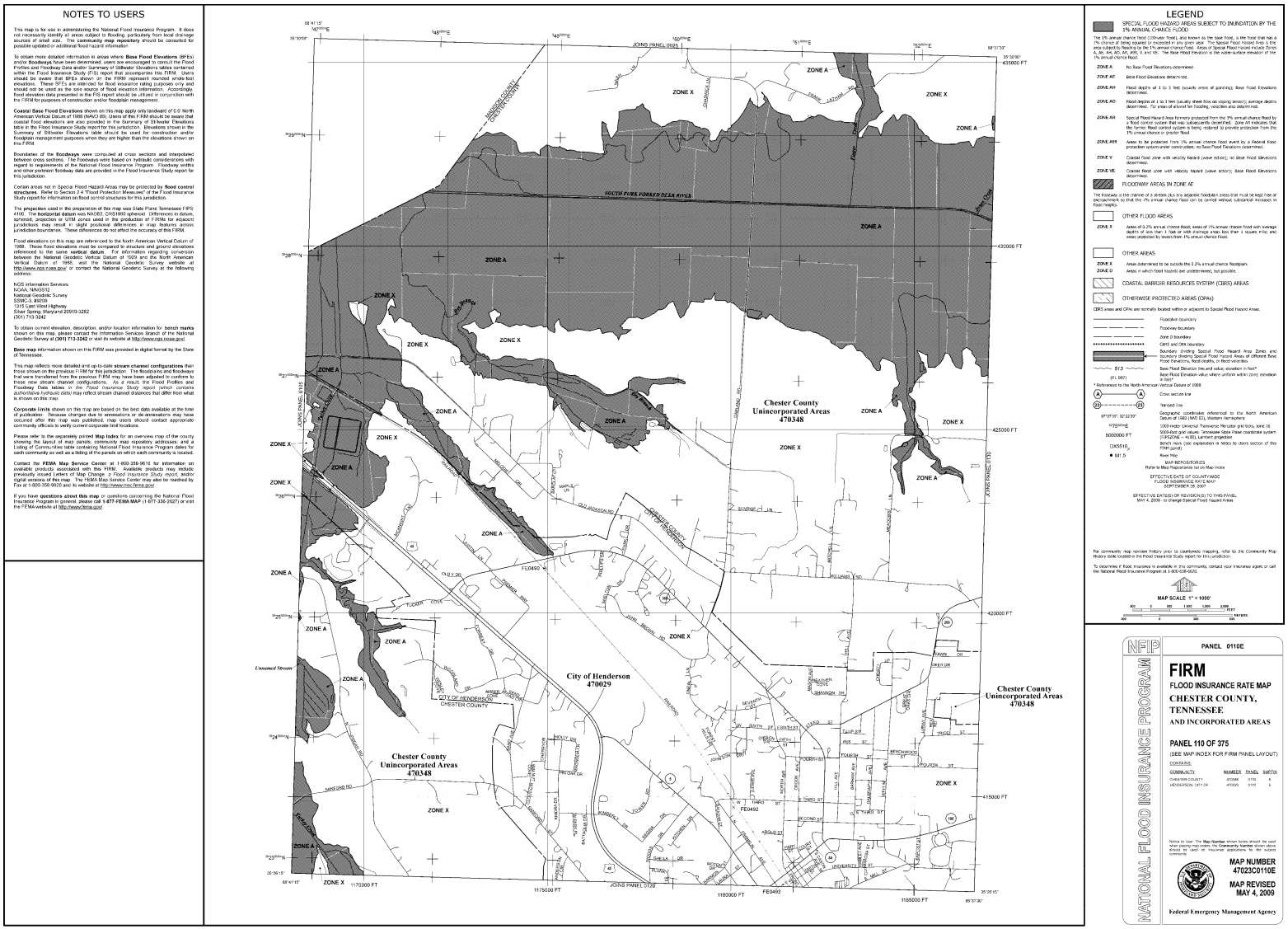
COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0105	E
HENDERSON, CITY OF	470029	0105	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0105E

MAP REVISED
MAY 4, 2009

Federal Emergency Management Agency



NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0 North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was State Plane Tennessee FIPS 4100. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9259
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

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This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

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LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A — No Base Flood Elevations determined.
ZONE AE — Base Flood Elevations determined.
ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 — Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988
A — A — Cross section line
23 — 23 — Transect line
97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
1000-meter Universal Transverse Mercator grid ticks, zone 16
6000000 FT — 5000-foot grid values: Tennessee State Plane coordinate system (FIPSZONE = 4100), Lambert projection
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 29, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
MAY 4, 2009 - to change Special Flood Hazard Areas

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0110E

FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 110 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

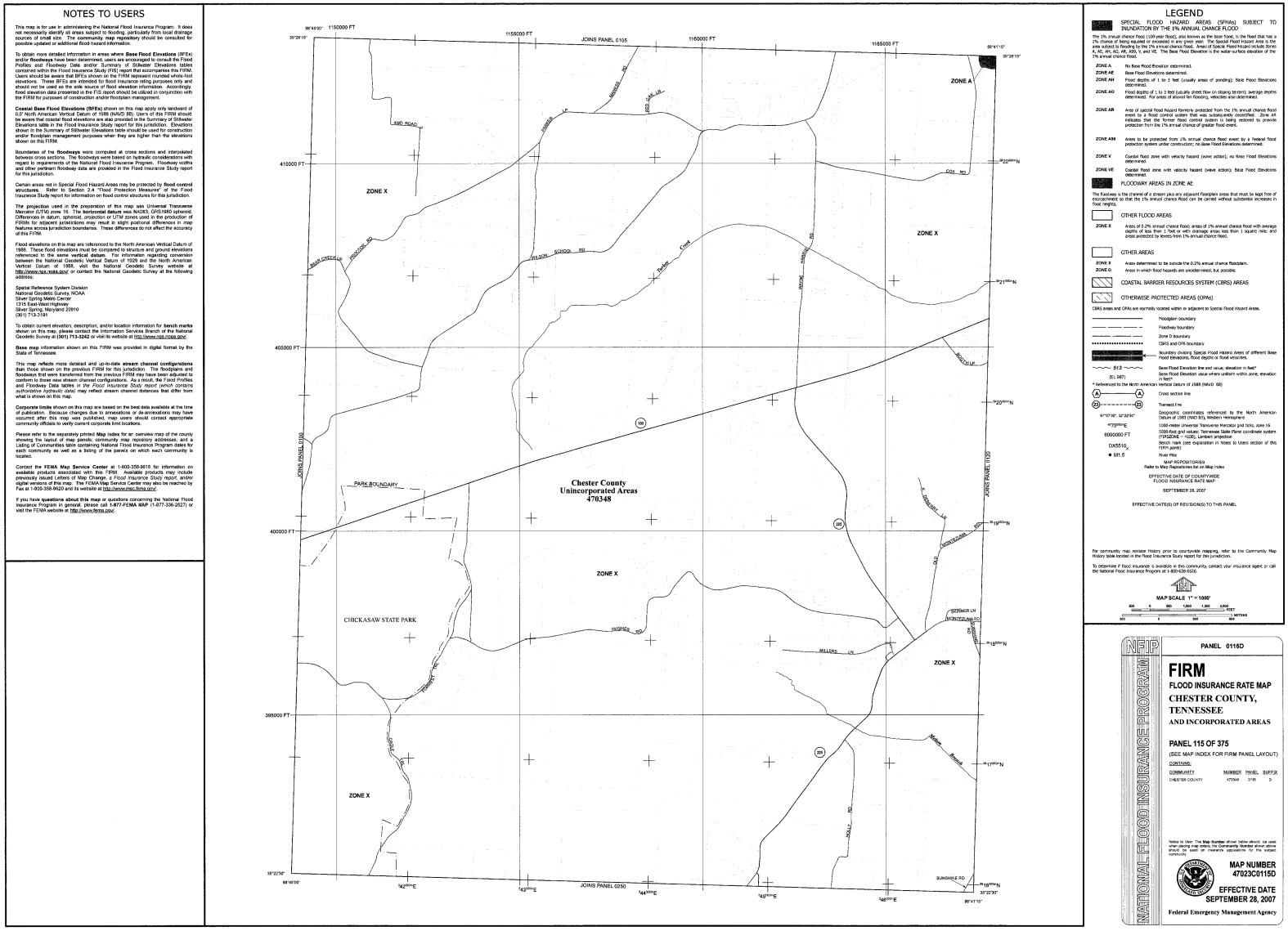
CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0110	E
HENDERSON, CITY OF	470029	0110	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0110E
MAP REVISED
MAY 4, 2009

Federal Emergency Management Agency



NOTES TO USERS

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To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

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The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 16. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

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Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

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LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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- **ZONE V** — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

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COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

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- Floodway boundary
- Zone D boundary
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- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- A — A — Cross section line
- 23 — 23 — Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4775000mE — 1000-meter Universal Transverse Mercator grid ticks, zone 16
- 6000000 FT — 5000-foot grid values: Tennessee State Plane coordinate system (FIPSZONE = 4100), Lambert projection
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 28, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

PANEL 0115D

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 115 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

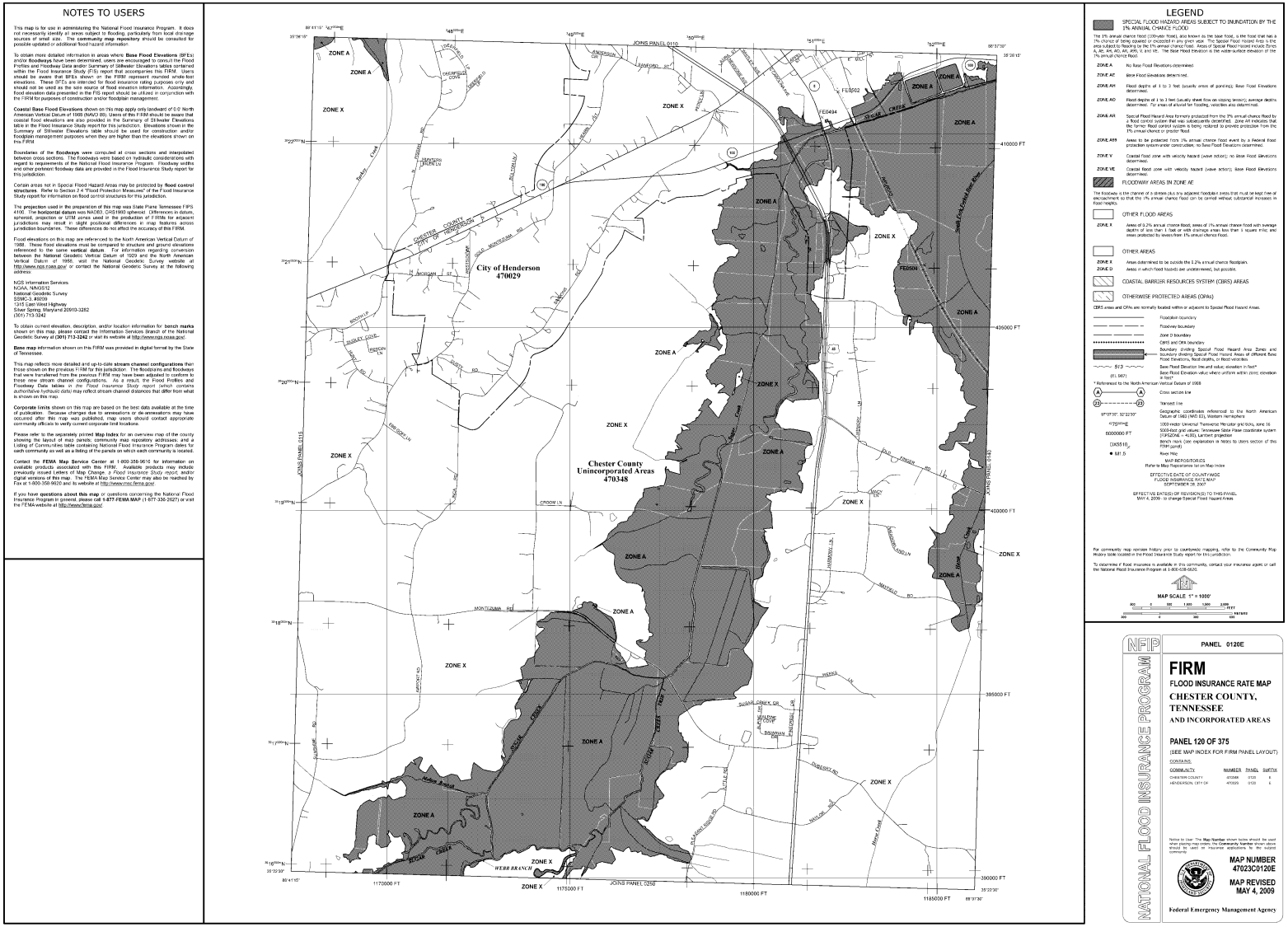
CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470349	0115	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0115D
EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency



NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0 North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was State Plane Tennessee FIPS 4100. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9259
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was provided in digital format by the State of Tennessee.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A — No Base Flood Elevations determined.
ZONE AE — Base Flood Elevations determined.
ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 — Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988
A — A — Cross section line
23 — 23 — Transect line
97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
1000-meter Universal Transverse Mercator grid ticks, zone 16
5000-foot grid values: Tennessee State Plane coordinate system (FIPSZONE = 4100), Lambert projection
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 28, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
MAY 4, 2009 - to change Special Flood Hazard Areas

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'
1000 0 1000 2000 3000 FEET
300 0 300 600 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0120E

FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 120 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

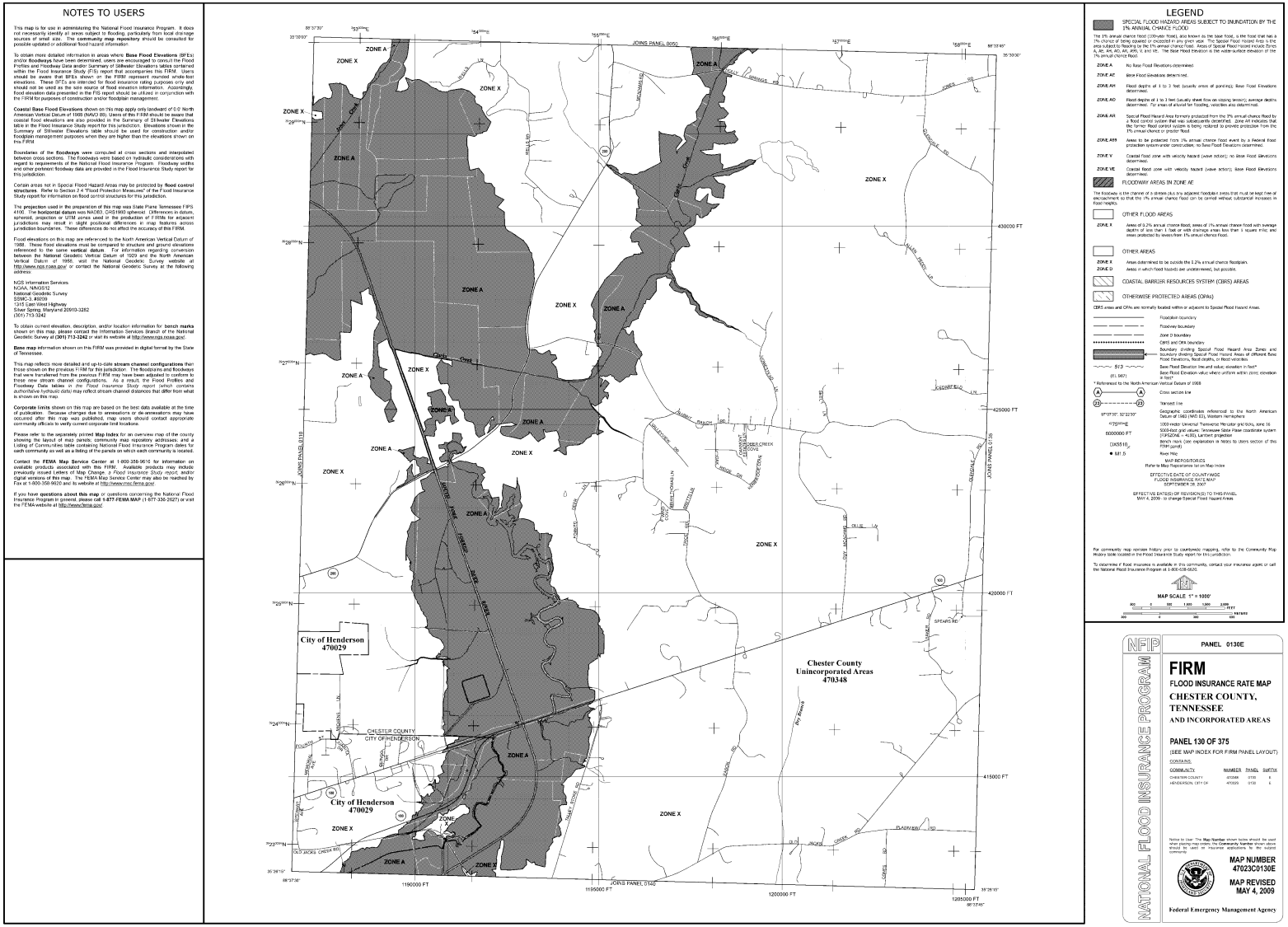
CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0120	E
HENDERSON, CITY OF	470029	0120	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0120E
MAP REVISED
MAY 4, 2009

Federal Emergency Management Agency



NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0 North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was State Plane Tennessee FIPS 4100. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9209
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was provided in digital format by the State of Tennessee.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

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If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A — No Base Flood Elevations determined.
ZONE AE — Base Flood Elevations determined.
ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 — Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988
A — A — Cross section line
23 — 23 — Transect line
97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
1000-meter Universal Transverse Mercator grid ticks, zone 16
6000000 FT — 5000-foot grid values: Tennessee State Plane coordinate system (FIPSZONE = 4100), Lambert projection
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 29, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
MAY 4, 2009 - to change Special Flood Hazard Areas

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0130E

FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 130 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

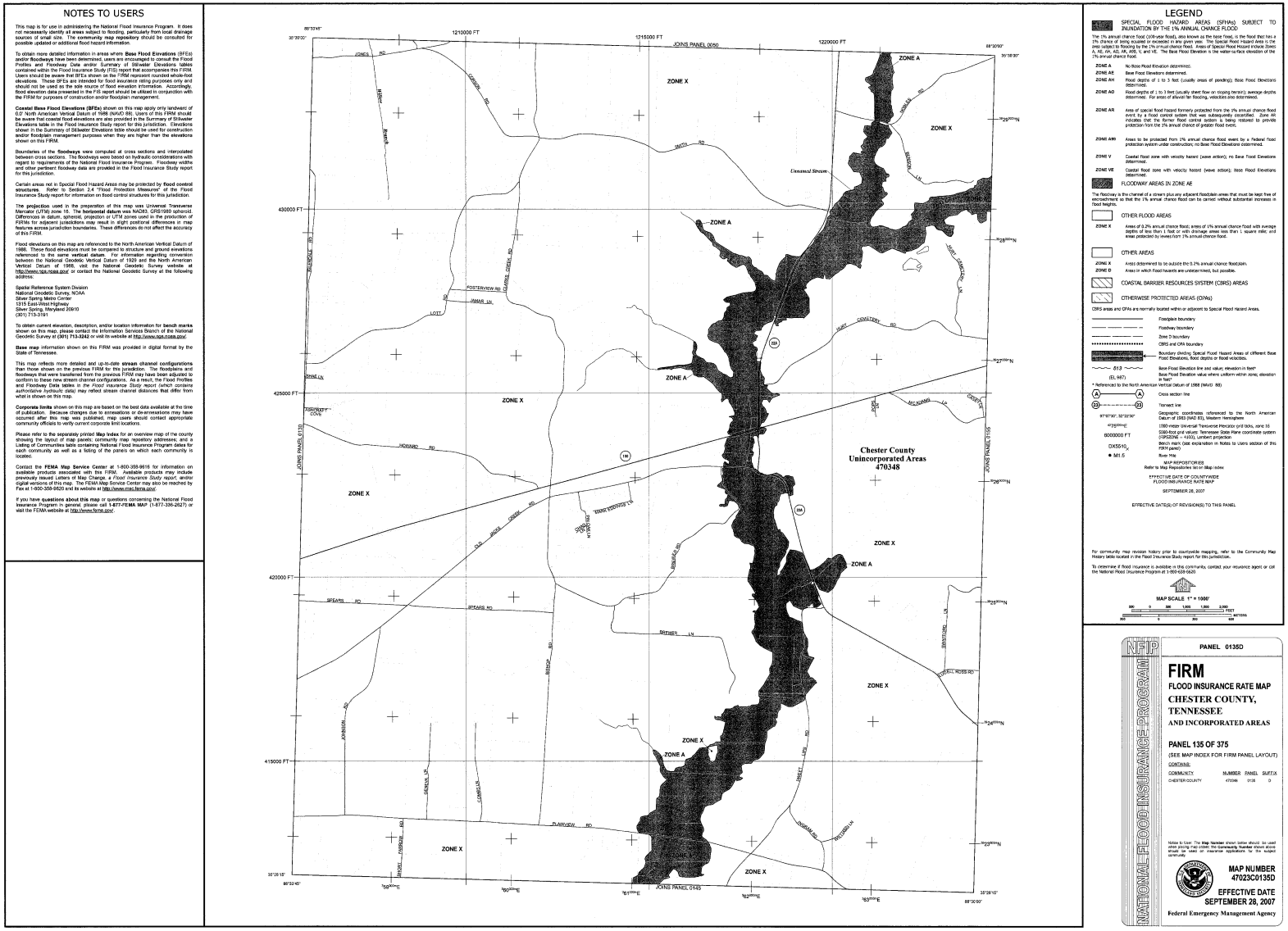
COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0130	E
HENDERSON, CITY OF	470029	0130	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0130E

MAP REVISED
MAY 4, 2009

Federal Emergency Management Agency



NOTES TO USERS

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Coastal Base Flood Elevations (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 16. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was provided in digital format by the State of Tennessee.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the *Flood Insurance Study report (which contains authoritative hydraulic data)* may reflect stream channel distances that differ from what is shown on this map.

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If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A — No Base Flood Elevation determined.
ZONE AE — Base Flood Elevations determined.
ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR — Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood event.
ZONE A99 — Area to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988 (NAVD 88)
A — A — Cross section line
23 — 23 — Transect line
97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
4720000 FT — 1000-meter Universal Transverse Mercator grid ticks, zone 16
6000000 FT — 5000-foot grid values: Tennessee State Plane coordinate system (SPCS)ZONE – 4100, Lambert projection
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORY(IES)
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 28, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'
500 0 500 1,000 1,500 2,000 FEET
150 0 150 300 METERS

PANEL 0135D

NFIP NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 135 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

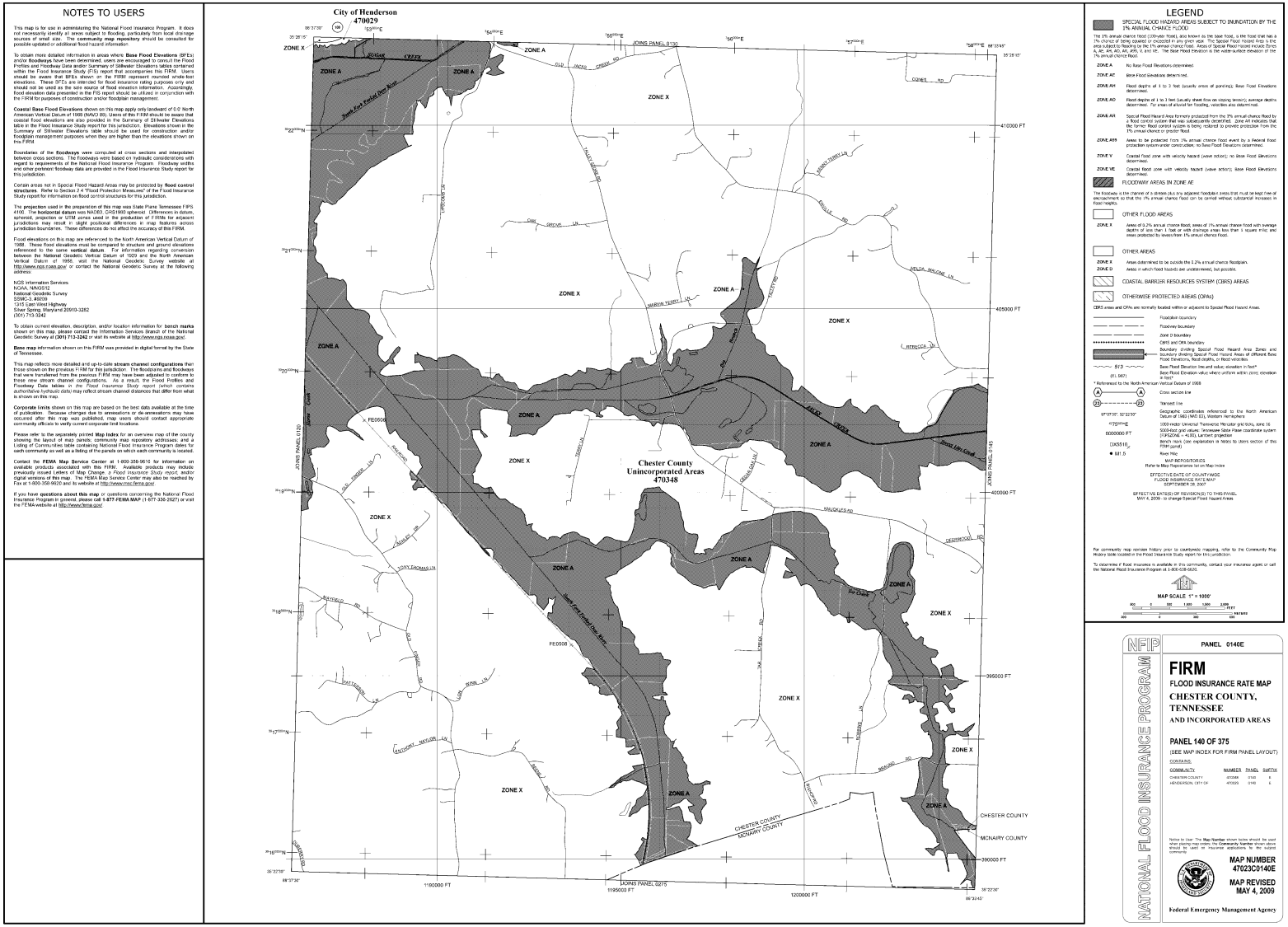
CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0135	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0135D
EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency



NOTES TO USERS

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Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

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Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9259
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

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City of Henderson
470029

Chester County
Unincorporated Areas
470348

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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ZONE A — No Base Flood Elevations determined.
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ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988
A — A — Cross section line
23 — 23 — Transect line
97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
4275000mE — 1000-meter Universal Transverse Mercator grid ticks, zone 16
6000000 FT — 5000-foot grid values: Tennessee State Plane coordinate system (FIPSZONE = 4100), Lambert projection
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 29, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
MAY 4, 2009 - to change Special Flood Hazard Areas

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0140E

FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 140 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

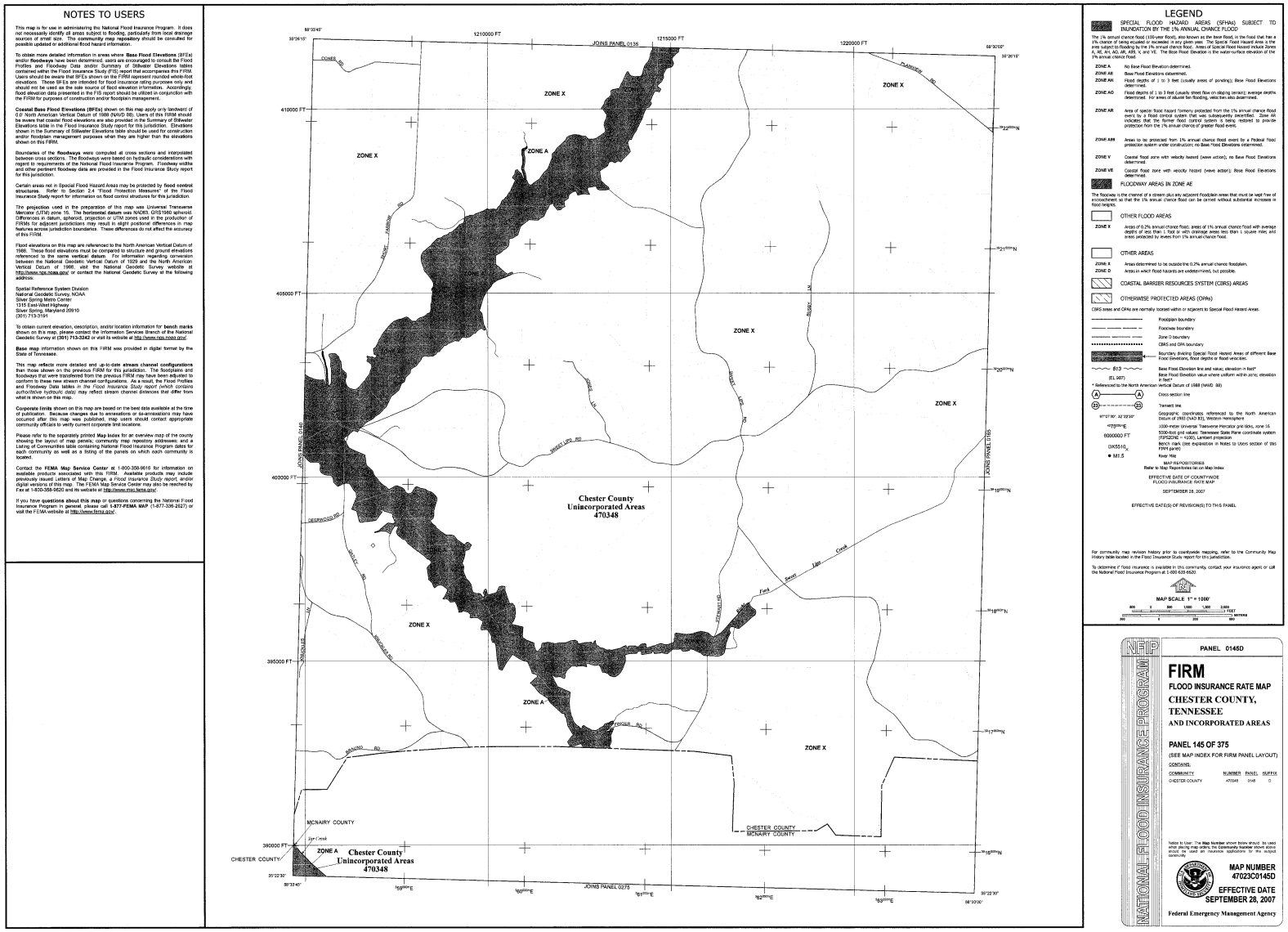
COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0140	E
HENDERSON, CITY OF	470029	0140	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0140E

MAP REVISED
MAY 4, 2009

Federal Emergency Management Agency



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Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

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Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

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LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increase in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

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COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

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Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513 (EL 987) — Base Flood Elevation line and value; elevation in feet*
* Referenced to the North American Vertical Datum of 1988 (NAVD 88)
A — A — Cross section line
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47°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
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6000000 FT — 5000-foot grid values: Tennessee State Plane coordinate system (FIPSZONE = 4100), Lambert projection
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M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 28, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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NORTH

MAP SCALE 1" = 1000'
800 0 800 1,600 2,400 FEET
240 0 240 480 METERS

PANEL 0145D

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 145 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

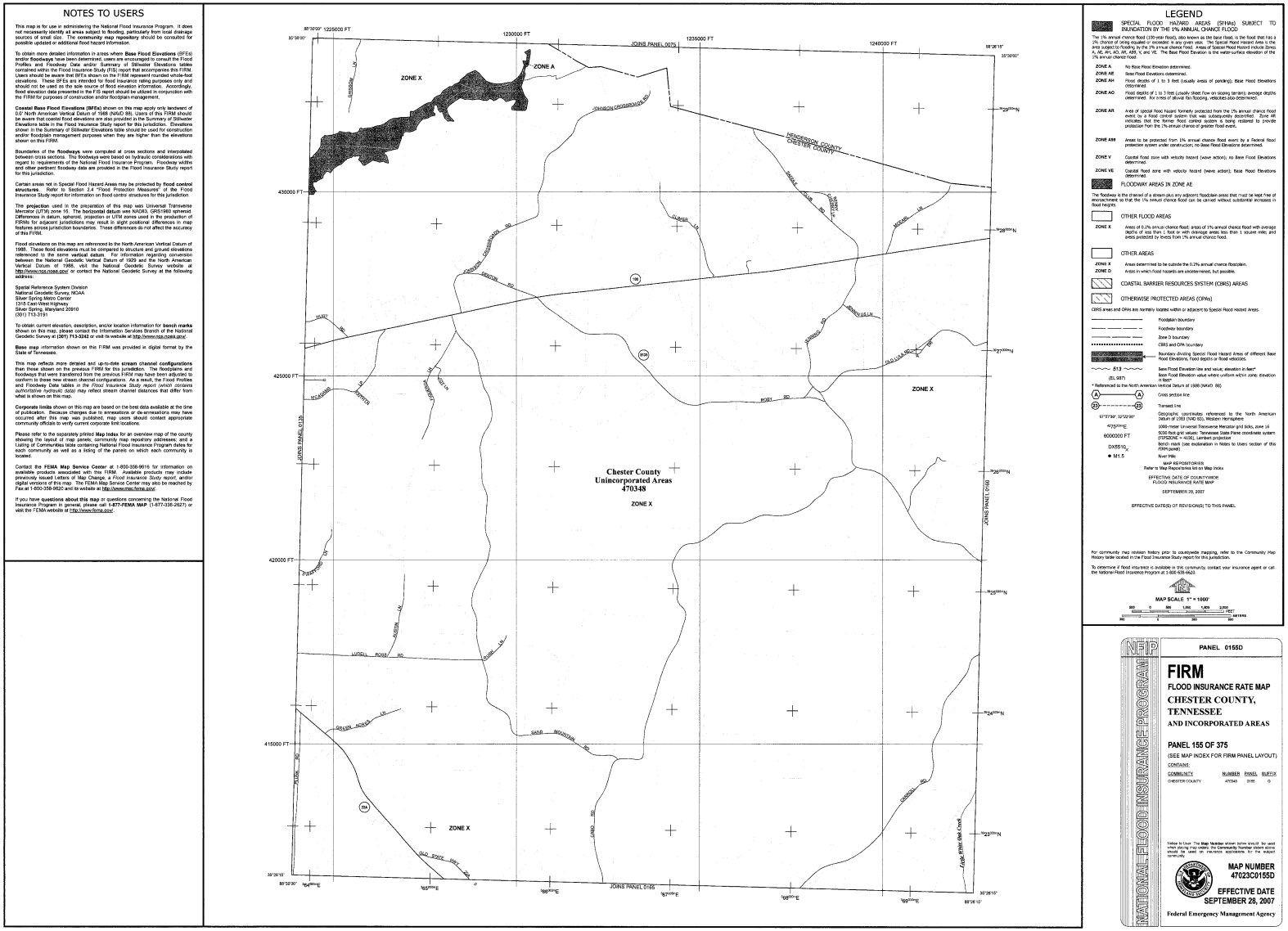
CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0145	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0145D
EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency



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1315 East-West Highway
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LEGEND

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DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 28, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 1000'

PANEL 0155D

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 155 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

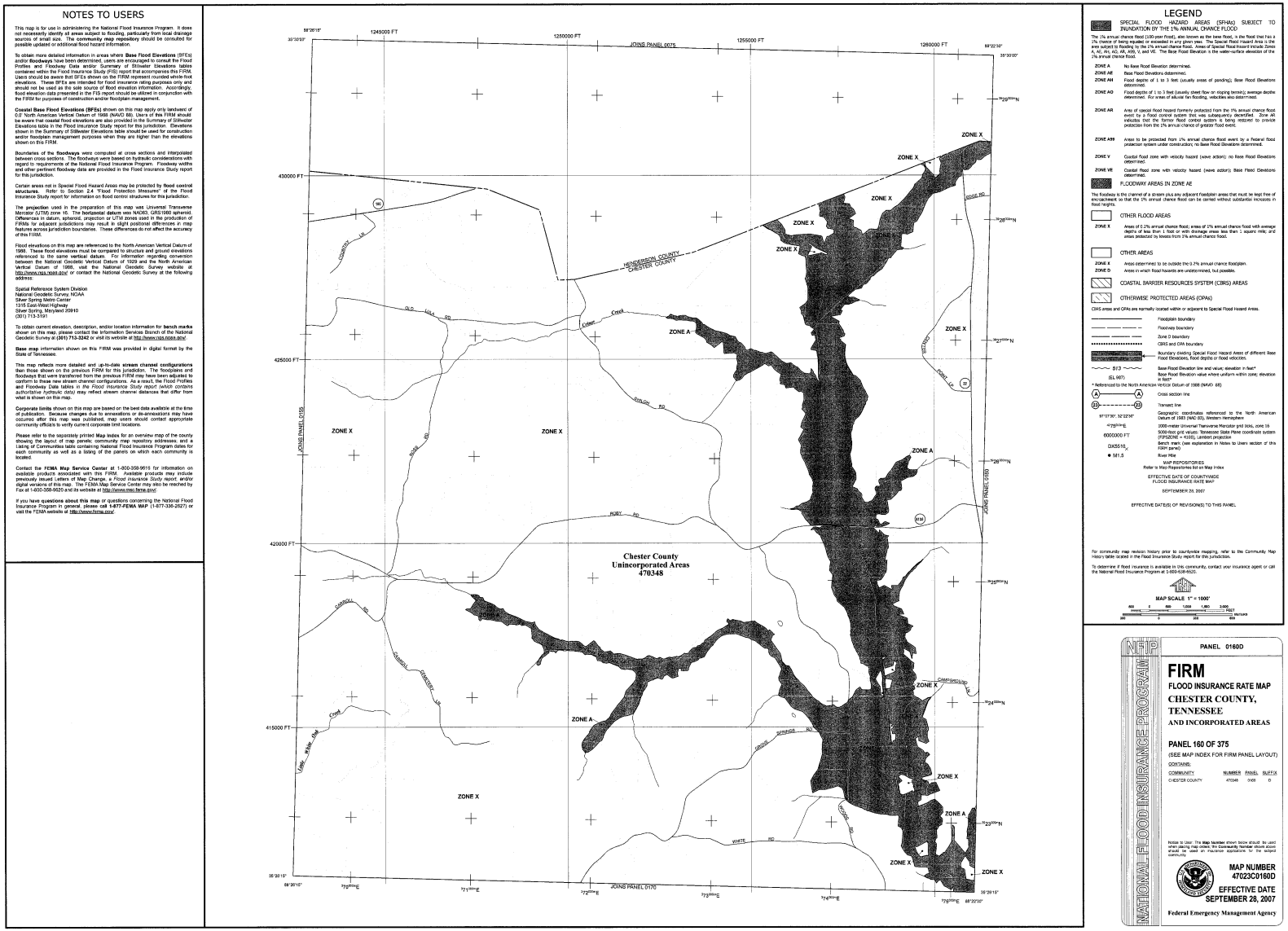
COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0155	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0155D

EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency



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If you **have questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A — No Base Flood Elevation determined.
ZONE AE — Base Flood Elevations determined.
ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR — Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood event.
ZONE A99 — Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988 (NAVD 88)
A — A — Cross section line
23 — 23 — Transect line
97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
4275000 mE — 1000-meter Universal Transverse Mercator grid ticks, zone 16
6000000 FT — 5000-foot grid values: Tennessee State Plane coordinate system (FIPSZONE = 4100), Lambert projection
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 28, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

PANEL 0160D

NATIONAL FLOOD INSURANCE PROGRAM

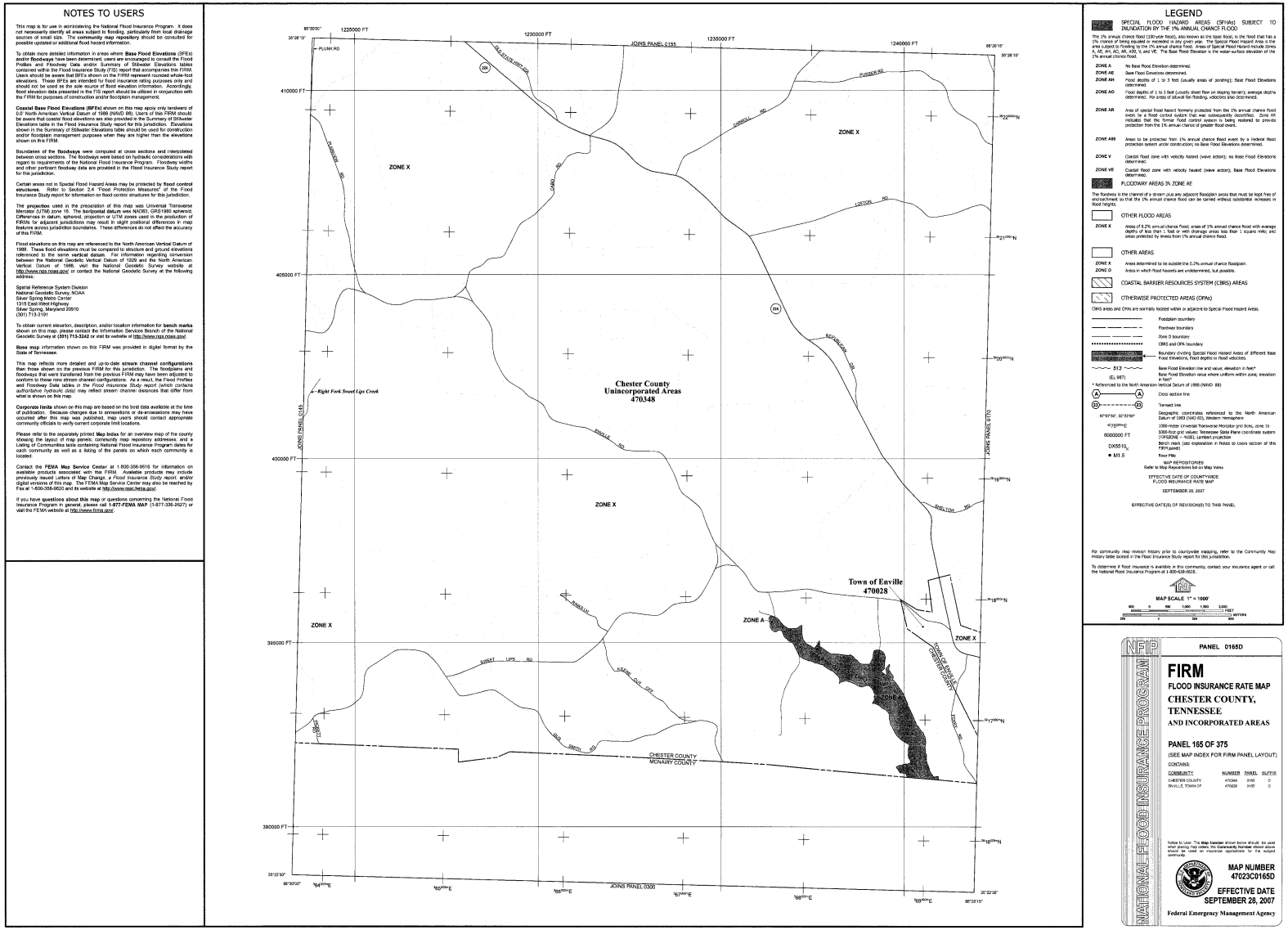
FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 160 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0160	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0160D
EFFECTIVE DATE
SEPTEMBER 28, 2007
Federal Emergency Management Agency



NOTES TO USERS

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Coastal Base Flood Elevations (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 16. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

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National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

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LEGEND

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- **ZONE AR** — Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood event.
- **ZONE A99** — Area to be protected from 1% annual chance flood event by a federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** — Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- A — A — Cross section line
- 23 — 23 — Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4272000 FT — 1000-meter Universal Transverse Mercator grid ticks, zone 15
- 6000000 FT — 5000-foot grid values: Tennessee State Plane coordinate system (FIPSZONE 4100), Lambert projection
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 28, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

PANEL 0165D

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 165 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0165	D
ENVILLE, TOWN OF	470028	0165	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0165D
EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency

NOTES TO USERS

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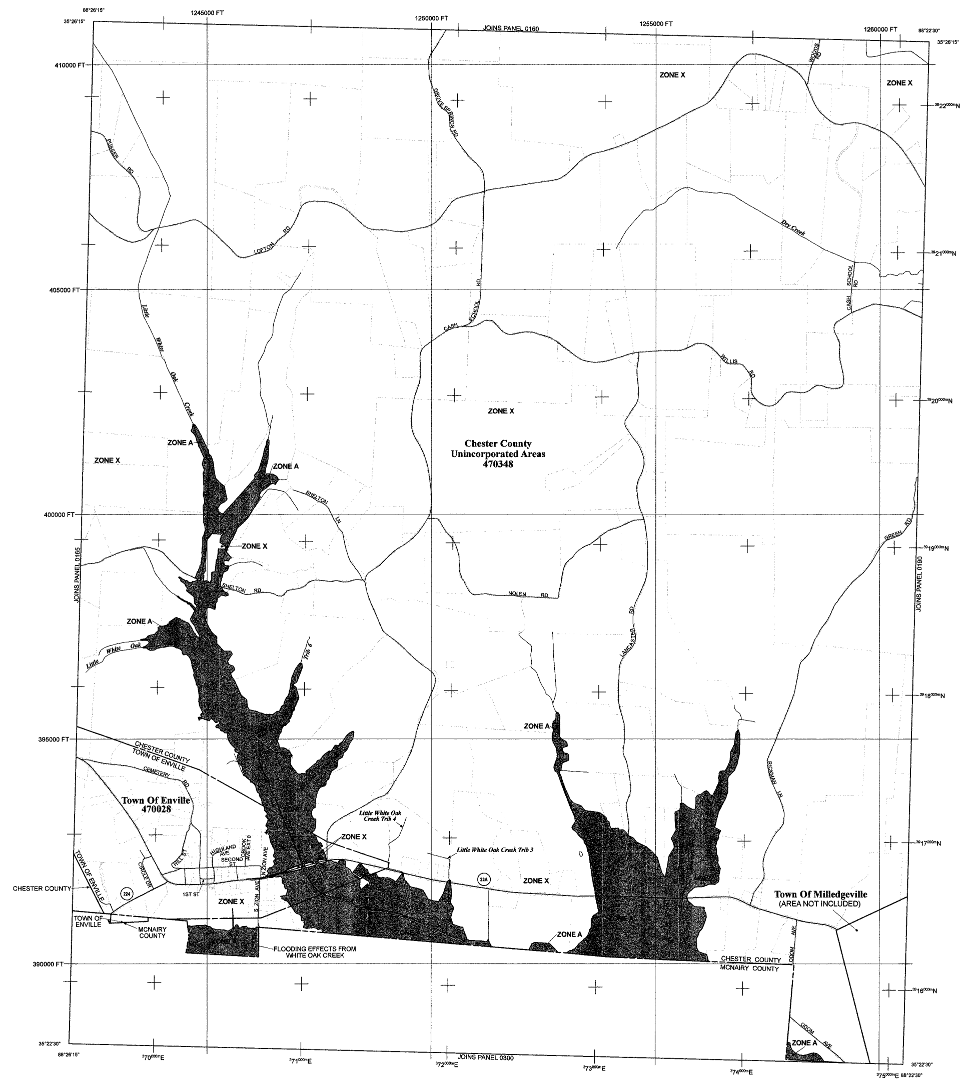

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

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ZONE A	No Base Flood Elevation determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance of greater flood event.
ZONE A99	Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
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* Referenced to the North American Vertical Datum of 1988 (NAVD 88)
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4275000mE 1000-meter Universal Transverse Mercator grid ticks, zone 16
6000000 FT 5000-foot grid values: Tennessee State Plane coordinate system (FIPSZONE = 4100), Lambert projection
DX5510 × Bench mark (see explanation in Notes to Users section of this FIRM panel)
● M1.5 River Mile

MAP REPOSITORIES
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EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP

SEPTEMBER 28, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 1000'

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0170D

FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 170 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0170	D
ENVILLE, TOWN OF	470028	0170	D

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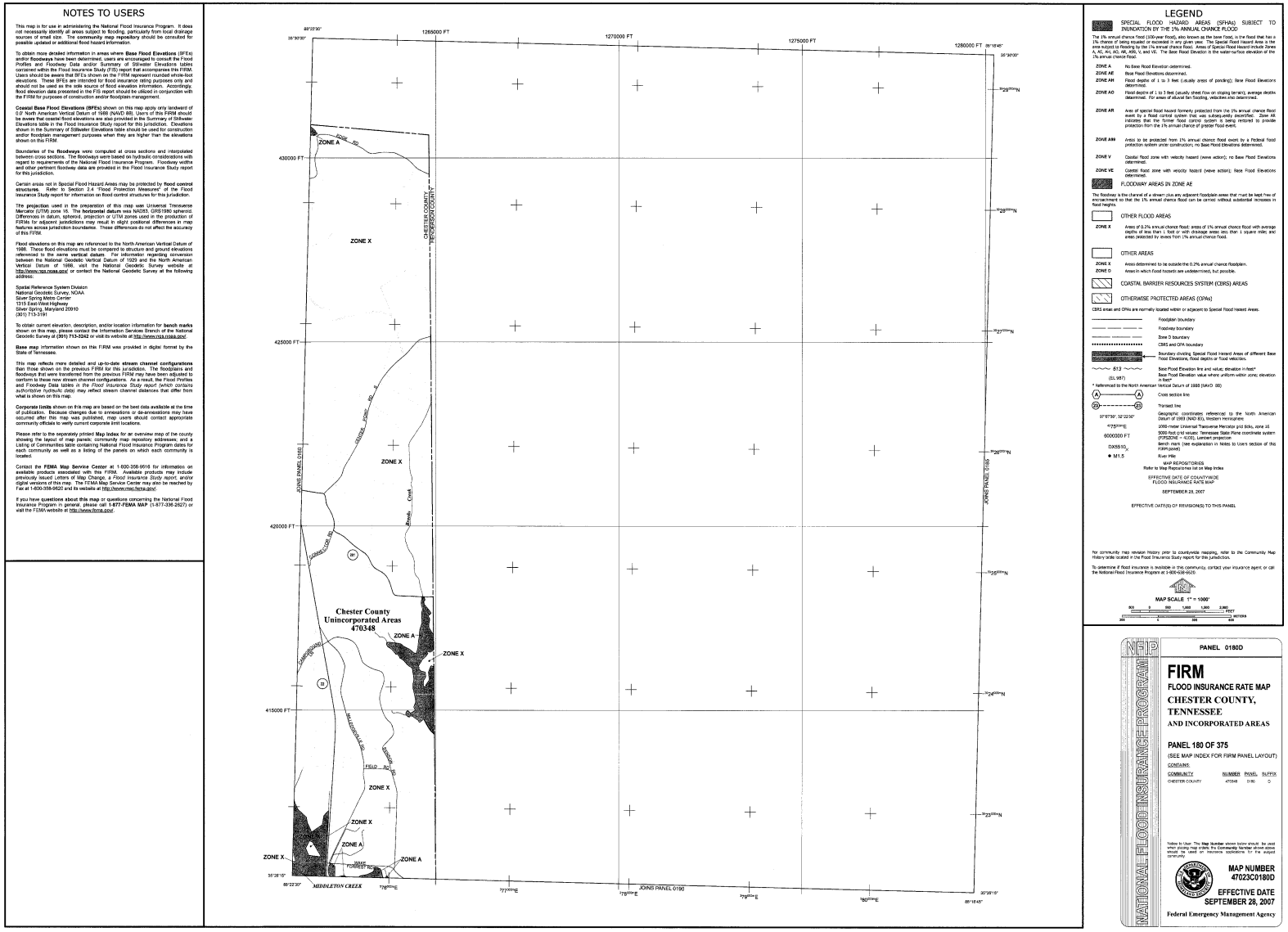
MAP NUMBER
47023C0170D

EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency



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LEGEND

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- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
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- **ZONE A99** Areas to be protected from 1% annual chance flood event by a federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 (EL 987) Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- Cross section line
- Transect line
- 97°07'30", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4275000mN 6000000 FT 1000-meter Universal Transverse Mercator grid ticks, zone 16
- DX510 5000-foot grid values: Tennessee State Plane coordinate system (FIPSZONE = 4100), Lambert projection
- M1.5 Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 28, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

PANEL 0180D

FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 180 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

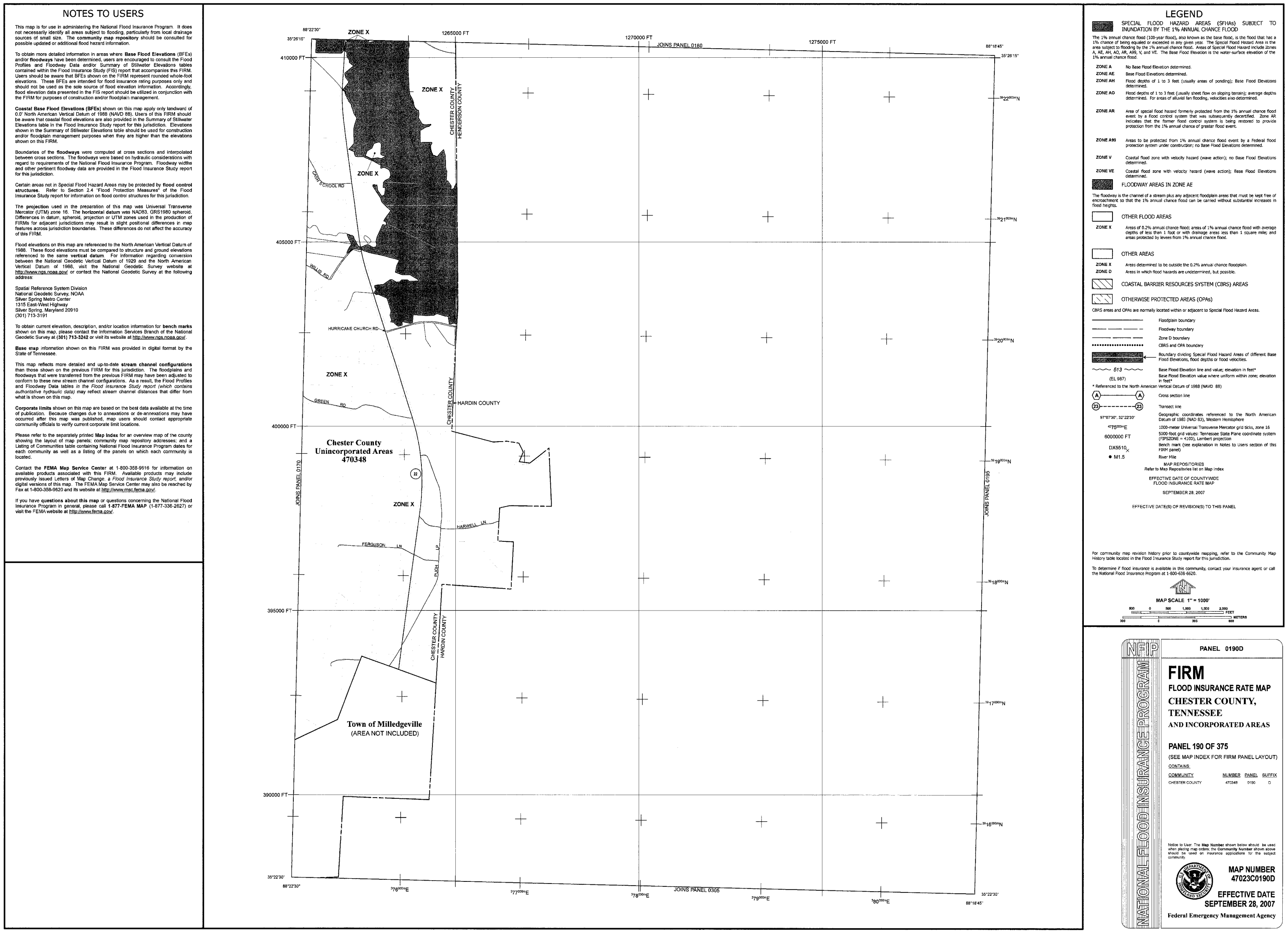
COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0180	D

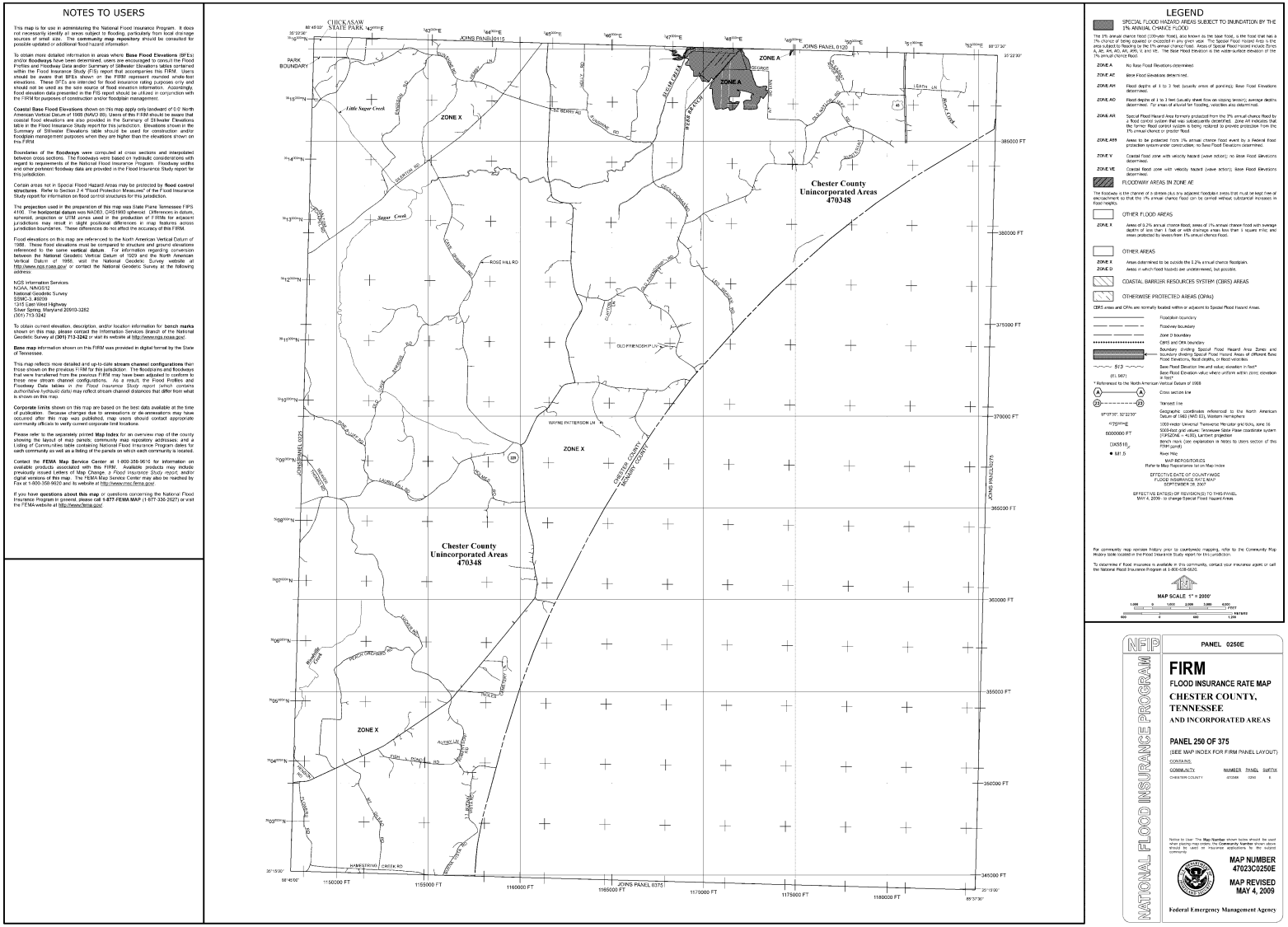
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0180D
EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM


NOTES TO USERS
LEGEND
ZONE X
CHESTER COUNTY
HENDERSON COUNTY
HARDIN COUNTY
HURRICANE CHURCH RD
Chester County
Unincorporated Areas
470348
Town of Milledgeville
(AREA NOT INCLUDED)
JOINS PANEL 0160
JOINS PANEL 0305
NATIONAL FLOOD INSURANCE PROGRAM
PANEL 0190D
FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS
PANEL 190 OF 375
MAP NUMBER
47023C0190D
EFFECTIVE DATE
SEPTEMBER 28, 2007
Federal Emergency Management Agency



NOTES TO USERS

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Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was State Plane Tennessee FIPS 4100. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in mapping features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9259
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was provided in digital format by the State of Tennessee.

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Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A — No Base Flood Elevations determined.
ZONE AE — Base Flood Elevations determined.
ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
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ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
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FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

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Floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zonic elevation in feet*
* Referenced to the North American Vertical Datum of 1988
A — A — Cross section line
23 — 23 — Transect line
97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
1000-meter Universal Transverse Mercator grid ticks, zone 16
6000000 FT — 5000-foot grid values: Tennessee State Plane coordinate system (FIPSZONE = 4100), Lambert projection
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 29, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
MAY 4, 2009 - to change Special Flood Hazard Areas

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'
1,000 0 1,000 2,000 3,000 4,000 FEET
400 0 400 800 1,200 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0250E

FIRM
FLOOD INSURANCE RATE MAP
CHESTER COUNTY, TENNESSEE
AND INCORPORATED AREAS

PANEL 250 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

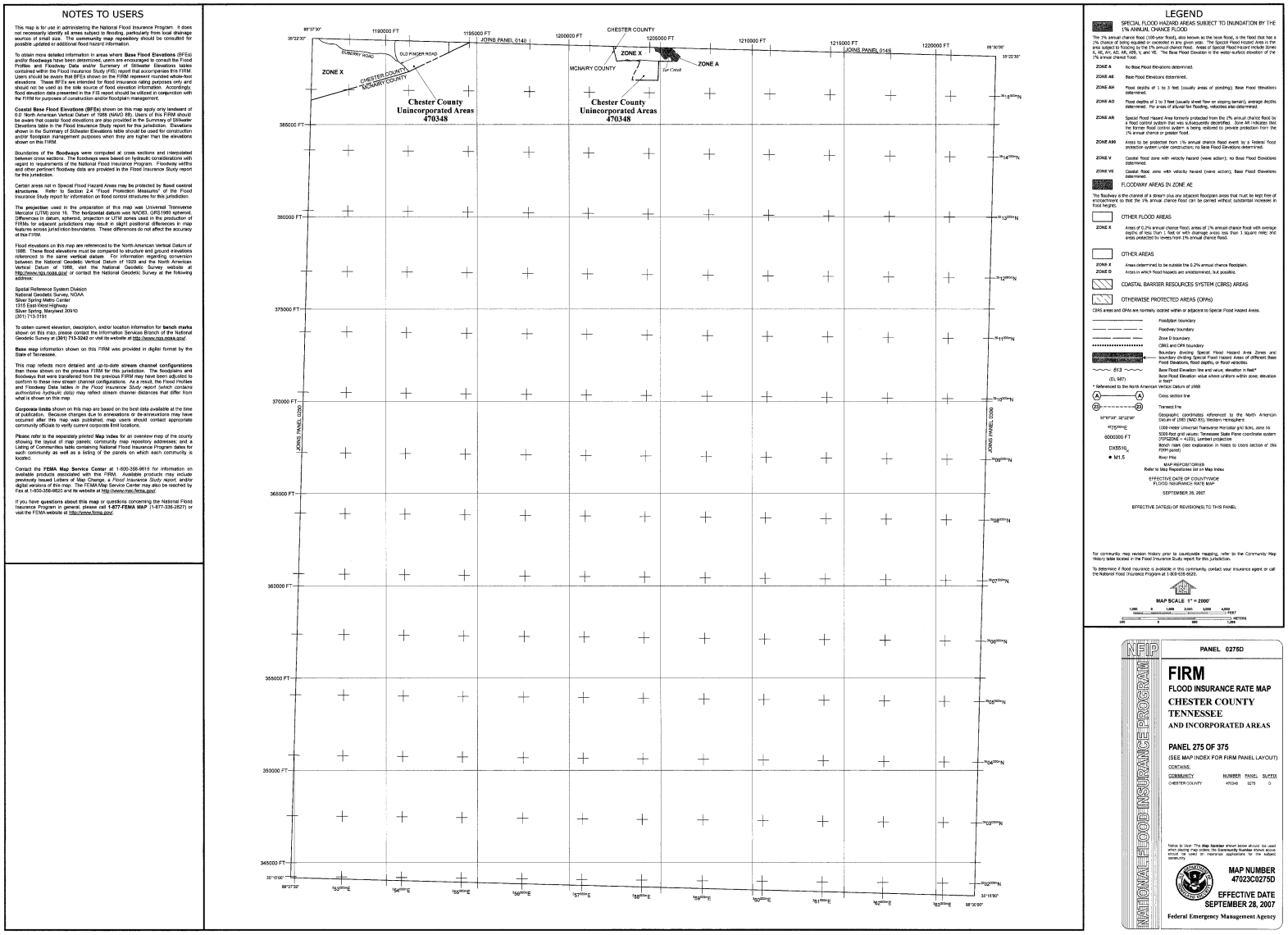
COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0250	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0250E

MAP REVISED
MAY 4, 2009

Federal Emergency Management Agency



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Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

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LEGEND

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- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
- 513 (EL 987) Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- A — A Cross section line
- 23 — 23 Transect line
- 97°07'30" 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4725000 FT 6000000 FT 1000-meter Universal Transverse Mercator grid ticks, zone 16
- 5000-foot grid values: Tennessee State Plane coordinate system (FIPSZONE = 4100), Lambert projection
- DX5510 Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
SEPTEMBER 28, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 2000'

1,000 0 1,000 2,000 3,000 4,000 FEET
500 0 500 1,000 METERS

NFIP

PANEL 0275D

FIRM

FLOOD INSURANCE RATE MAP

CHESTER COUNTY
TENNESSEE
AND INCORPORATED AREAS

PANEL 275 OF 375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHESTER COUNTY	470348	0275	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
47023C0275D

EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

Appendix 5

HAZUS: 500-year Flood Study

Hazus: Flood Global Risk Report

Region Name:	Chester_County
Flood Scenario:	Chester_County_500yr_Flood
Print Date:	Wednesday, October 30, 2019

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Flood. These results can be improved by using enhanced inventory data and flood hazard information.

FEMA

RiskMAP
Increasing Resilience Together

Table of Contents

RiskMAP
Increasing Resilience Together

General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- Tennessee

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is approximately 286 square miles and contains 986 census blocks. The region contains over 6 thousand households and has a total population of 17,131 people (2010 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 7,192 buildings in the region with a total building replacement value (excluding contents) of 1,208 million dollars. Approximately 92.30% of the buildings (and 78.16% of the building value) are associated with residential housing.

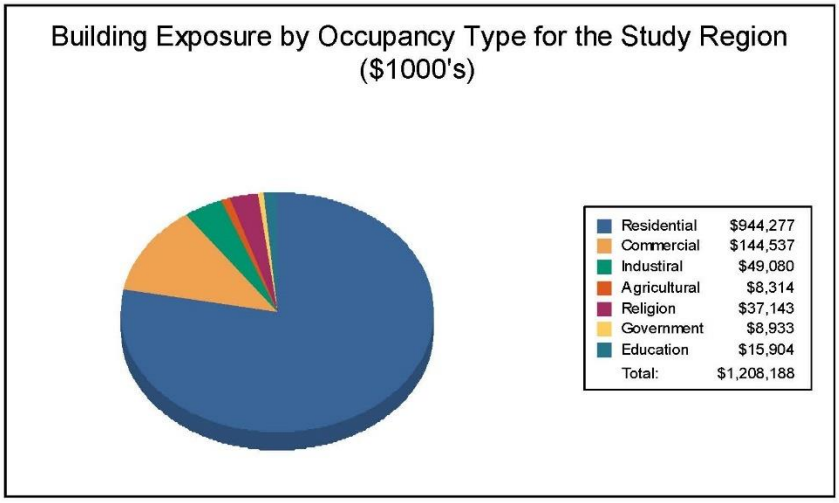
Building Inventory

General Building Stock

Hazus estimates that there are 7,192 buildings in the region which have an aggregate total replacement value of 1,208 million dollars. Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

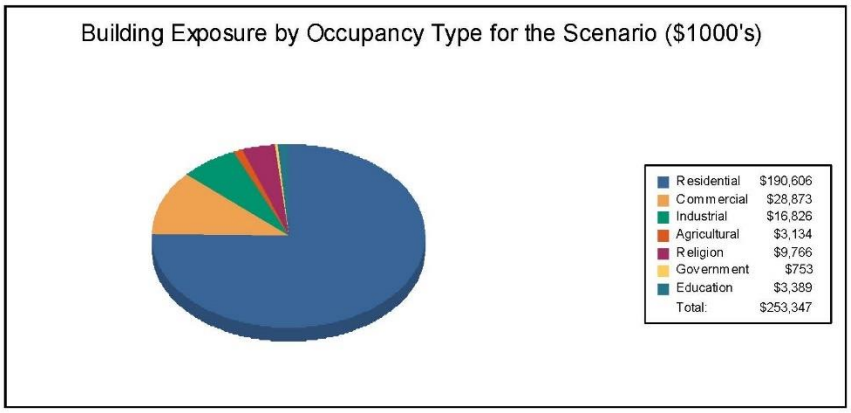
Occupancy	Exposure ($1000)	Percent of Total
Residential	944,277	78.2%
Commercial	144,537	12.0%
Industrial	49,080	4.1%
Agricultural	8,314	0.7%
Religion	37,143	3.1%
Government	8,933	0.7%
Education	15,904	1.3%
Total	**1,208,188**	**100%**



HAZUS
EARTHQUAKE - WIND - FLOOD - TSUNAMI

Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	190,606	75.2%
Commercial	28,873	11.4%
Industrial	16,826	6.6%
Agricultural	3,134	1.2%
Religion	9,766	3.9%
Government	753	0.3%
Education	3,389	1.3%
Total	**253,347**	**100%**



Essential Facility Inventory

For essential facilities, there are no hospitals in the region with a total bed capacity of no beds.
There are 8 schools, 3 fire stations, 2 police stations and 1 emergency operation center.

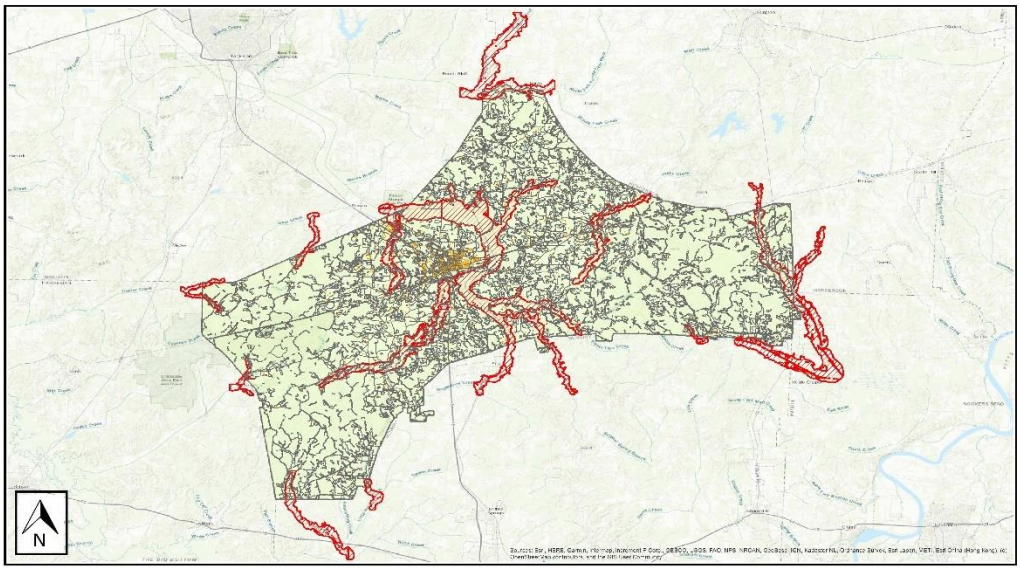
Flood Scenario Parameters

Hazus used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	Chester_County
Scenario Name:	Chester_County_500yr_Flood
Return Period Analyzed:	500
Analysis Options Analyzed:	No What-Ifs

Study Region Overview Map

Illustrating scenario flood extent, as well as exposed essential facilities and total exposure



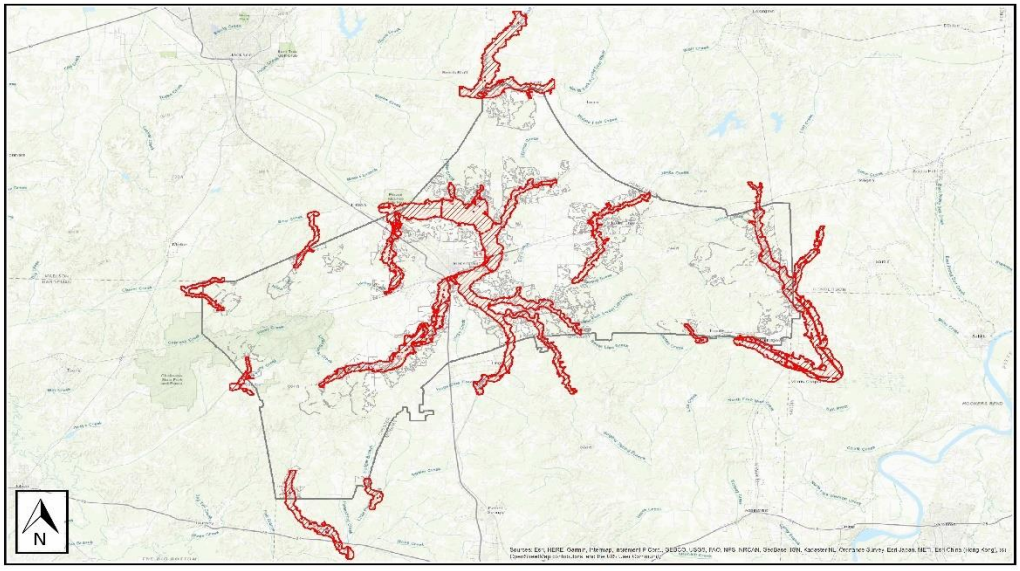
HAZUS
EARTHQUAKE · WIND · FLOOD · TSUNAMI

Building Damage

General Building Stock Damage

Hazus estimates that about 15 buildings will be at least moderately damaged. This is over 81% of the total number of buildings in the scenario. There are an estimated 0 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Flood Technical Manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Total Economic Loss (1 dot = $300K) Overview Map



HAZUS
EARTHQUAKE - WIND - FLOOD - TSUNAMI

Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		>50	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0
Commercial	0	0	1	100	0	0	0	0	0	0	0	0
Education	0	0	0	0	0	0	0	0	0	0	0	0
Government	0	0	0	0	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0	0	0	0	0
Religion	0	0	0	0	0	0	0	0	0	0	0	0
Residential	8	36	10	45	3	14	1	5	0	0	0	0
Total	**8**		**11**		**3**		**1**		**0**		**0**	

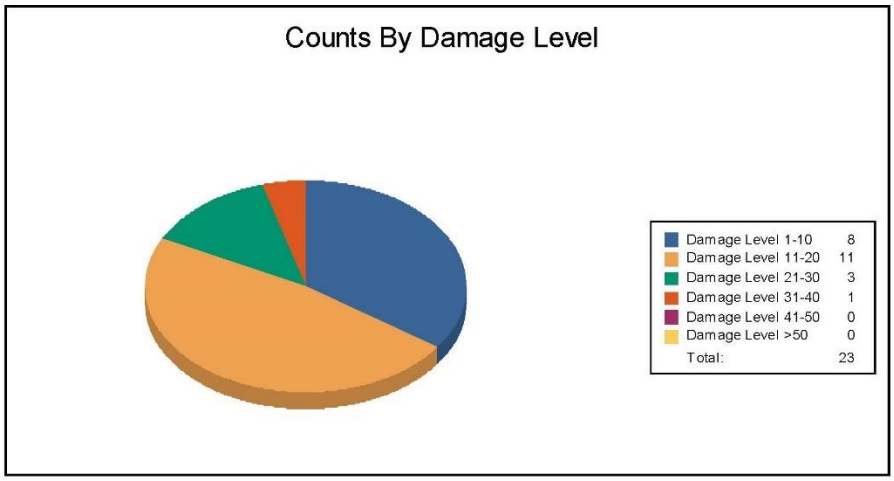


Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		>50	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	0	0	0	0	0	0	0	0	0	0	0	0
ManufHousing	0	0	0	0	0	0	0	0	0	0	0	0
Masonry	0	0	0	0	0	0	0	0	0	0	0	0
Steel	0	0	0	0	0	0	0	0	0	0	0	0
Wood	8	36	10	45	3	14	1	5	0	0	0	0

Essential Facility Damage

Before the flood analyzed in this scenario, the region had 0 hospital beds available for use. On the day of the scenario flood event, the model estimates that 0 hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Emergency Operation Centers	1	0	0	0
Fire Stations	3	1	0	1
Hospitals	0	0	0	0
Police Stations	2	0	0	0
Schools	8	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

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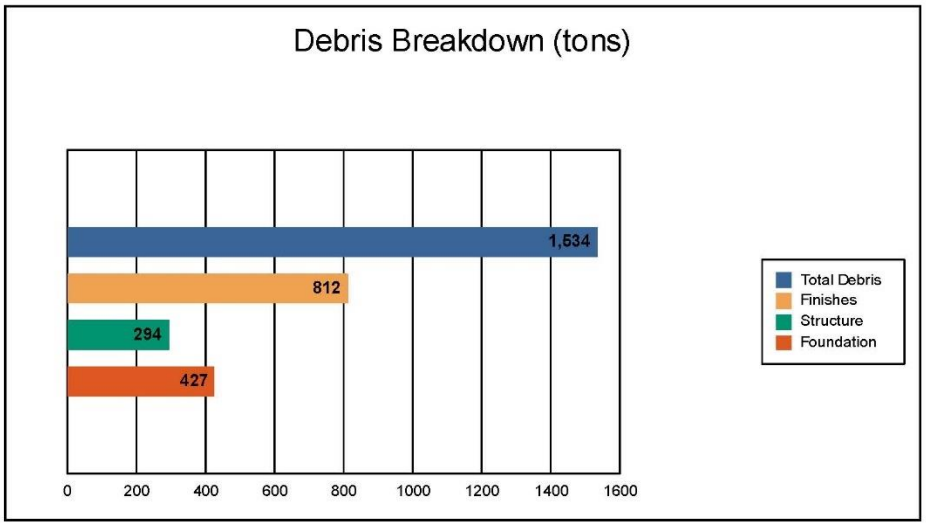
Induced Flood Damage

Debris Generation

Hazus estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

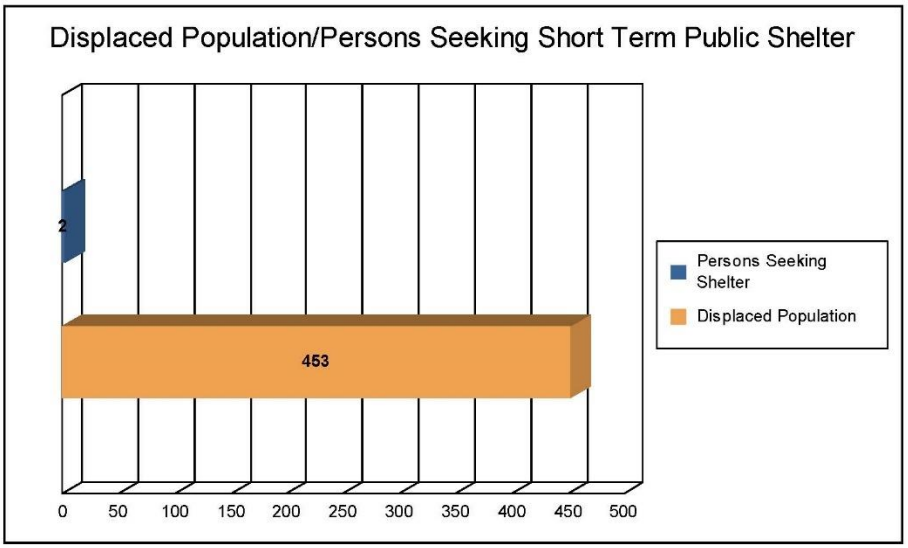


The model estimates that a total of 1,534 tons of debris will be generated. Of the total amount, Finishes comprises 53% of the total, Structure comprises 19% of the total, and Foundation comprises 28%. If the debris tonnage is converted into an estimated number of truckloads, it will require 62 truckloads (@25 tons/truck) to remove the debris generated by the flood.

Social Impact

Shelter Requirements

Hazus estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. Hazus also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 151 households (or 453 of people) will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 2 people (out of a total population of 17,131) will seek temporary shelter in public shelters.



Economic Loss

The total economic loss estimated for the flood is 26.51 million dollars, which represents 10.46 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 15.56 million dollars. 41% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 39.51% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

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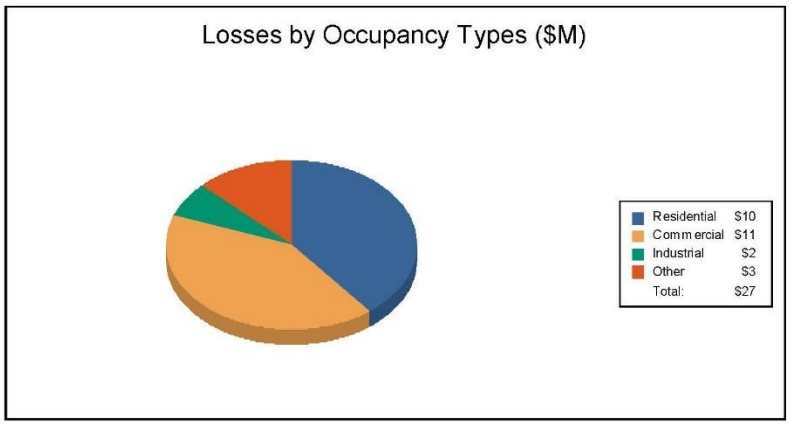
Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	5.37	1.05	0.40	0.16	6.98
	Content	2.72	3.51	1.01	0.99	8.22
	Inventory	0.00	0.12	0.22	0.02	0.36
	Subtotal	**8.08**	**4.68**	**1.62**	**1.17**	**15.56**
Business Interruption						
	Income	0.00	2.25	0.03	0.27	2.55
	Relocation	1.87	0.57	0.03	0.13	2.61
	Rental Income	0.52	0.40	0.01	0.04	0.97
	Wage	0.00	3.00	0.06	1.77	4.83
	Subtotal	**2.39**	**6.23**	**0.13**	**2.20**	**10.95**
ALL	**Total**	**10.47**	**10.91**	**1.75**	**3.37**	**26.51**



FEMA

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Appendix A: County Listing for the Region

Tennessee

- Chester

Appendix B: Regional Population and Building Value Data

		Building Value (thousands of dollars)		
	Population	Residential	Non-Residential	Total
Tennessee				
Chester	17,131	944,277	263,911	1,208,188
Total	**17,131**	**944,277**	**263,911**	**1,208,188**
Total Study Region	**17,131**	**944,277**	**263,911**	**1,208,188**

Appendix 7

Ongoing Performance Tasks

1. The EMA will continue to educate the public on preparedness and safety.

2. The EMA will continue to participate in formal campaigns such as CUSEC's Earthquake Awareness Week.

3. The EMA will continue to coordinate activities for severe weather awareness week.

4. The EMA will continue to encourage residents to buy flood and earthquake insurance.

5. The utility companies have adopted a program to maintain right of ways. This on-going program will continue to keep power lines free of ground growth and tree limbs that could cause power outages during severe storms.

6. EMA will continue to monitor any flooding conditions that may arise within the county.

7. The EMA will continue working with all agencies to review and update the BEOP and other response plans.

8. The EMA will continue working with those agencies that will provide shelter during times of emergencies.

9. The mitigation committee working with the local media will provide periodic releases dealing with personal disaster plans for the general public; such as maintaining emergency supplies, family contacts, evacuation plans, shelter locations, etc.

Appendix 8

Ordinances

To be completed after FEMA approval