



# SUMNER COUNTY COMMISSION

355 N. Belvedere Drive – Room 111  
Gallatin, Tennessee 37066-5410

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## Commissioners

*Terry Moss – 1st*

*Terry Wright – 2nd*

*Mark Harrison – 3rd*

*Dillon Lamberth – 4th*

*Darrell Rogers – 5th*

*David Klein – 6th*

*Danny Sullivan – 7th*

*Baker Ring – 8th*

*Dr. Mary Genung – 9th*

*Benjamin Harris – 10th*

*Kevin Pomeroy – 11th*

*Deborah Holmes – 12th*

*Terri Boyt – 13th*

*Dr. Jamie Teachenor – 14th*

*J. Wes Wynne – 15th*

*Jeremy Mansfield – 16th*

*Robert Brown III – 17th*

*Don Schmit – 18th*

*Shannon Burgdorf – 19th*

*Merrol Hyde – 20th*

*Jerry Becker – 21<sup>st</sup>*

*Matthew Shoaf – 22<sup>nd</sup>*

*Tim Jones – 23<sup>rd</sup>*

*Chrissi Miller – 24<sup>th</sup>*

The following minutes are included in this packet:

**Education Committee.....November 6**

**General Operations.....November 6**

**Health & Emergency Services.....November 6**

**Legislative Committee.....November 13**

**MINUTES  
AMENDED  
EDUCATION COMMITTEE  
CHAIRMAN, ROBERT BROWN III  
NOVEMBER 6, 2023**

**Present:**

Robert Brown, III, Chairman  
Shannon Burgdorf, Vice-Chairman  
Jerry Becker  
Dillon Lamberth  
Don Schmit  
Danny Sullivan

**Absent:**

Darrell Rogers

**Also Present:**

John Isbell, County Mayor  
Eric Sitler, Law Director  
Steve Weiner, Staff Attorney  
Merrol Hyde, Commission Chairman  
Dr. Scott Langford, Director of Schools  
Jennifer Mitchell, minute taker

Chairman Brown brought the regular meeting of the Education Committee to order with an invocation by Comm. Lamberth on Monday, November 6, 2023, at 6:00 p.m. in the Sumner County Administration building in Gallatin. Chairman Brown declared a quorum to conduct business.

3. Adoption of the Agenda.

Chairman Brown removed item 9a from the agenda and deferred item 10e to June 2024.

Upon motion of Comm. Sullivan, seconded by Comm. Becker, the Committee unanimously approved the agenda as amended.

4. Approval of Minutes October 2, 2023.

Comm. Lamberth moved, seconded by Comm. Sullivan, to approve the minutes from October 2, 2023. The Committee voted to approve (5-0-1). Comm. Becker abstained from the vote.

5. Approval of Minutes October 20, 2023.

Comm. Schmit moved, seconded by Comm. Sullivan, to approve the minutes from October 20, 2023. The Committee voted to approve (5-0-1). Comm. Becker abstained from the vote.

6. Recognition of the Public.

Sara Squires of 136 Chesapeake Harbor, Hendersonville spoke to powers the County Commission has concerning schools.

7. Report of the Chairman. No report

7. Report of County Mayor. No report

8. Report of Director of Schools. Director of Schools Scott Langford thanked the Committee for approval of the approximately \$15.8M transfer for athletic facilities and reported work has begun. He also expressed great concern with specific school safety concerns published on a public agenda.

9. Old Business.

- a. David Lawing's Financial Presentation. – removed from the agenda
- b. SCBOE plan to alleviate overcrowding – Gallatin High School

Dr. Langford reported he met with Principal Becker and staff and the school is running great.

Chairman Brown stated item to remain on old business.

10. New Business.

- a. Sumner County Board of Education Amendments (for approval)
  - 1. Budget Amendment 2
  - 2. Budget Amendment 3
  - 3. Budget Amendment 4

Chairman Brown moved, seconded by Comm. Becker, to group and approve items 10a1 through 10a3. The motion carried unanimously.

- b. Sumner County Board of Education Amndments (for information only)
  - 1. Budget Amendment 16
  - 2. Budget Amendment 17
  - 3. Budget Amendment 18
  - 4. Budget Amendment 21
  - 5. Budget Amendment 23
  - 6. Budget Amendment 46
  - 7. Budget Amendment 48

- 8. Budget Amendment 103
- 9. Budget Amendment 134
- 10. Budget Amendment 139
- 11. Budget Amendment 140

- c. Copier leases – Oakmont Elementary, guild Elementary, White House HS, Gallatin HS

Comm. Sullivan moved, seconded by Comm. Lamberth, to approve. The motion carried unanimously.

- d. Discussion: Appropriate literature in schools.

Chairman Brown moved, seconded by Comm. Schmit, to discuss. The motion carried unanimously.

Chairman Brown explained that Tennessee law carried higher penalties than Missouri and Indiana. (Missouri and Indiana law attached).

After discussion, Comm. Schmit moved, seconded by Comm. Becker, to encourage the School Board to discuss and develop a plan. The motion carried unanimously.

- e. Security issues in northern Sumner County – plastic walls. – deferred to June 2024

#### 11. Adjournment.

Chairman Brown declared the Committee adjourned at 6:16 p.m. upon motion of Comm. Becker and seconded by Comm. Sullivan.

Prepared by Jennifer Mitchell

# Education

## RECOGNITION OF THE PUBLIC

\*\*\*SPEAK ONLY TO ITEMS ON THE AGENDA\*\*\*

MEETING DATE: 11-6-2023

	NAME	COMPLETE ADDRESS & TELEPHONE #	AGENDA ITEM
1	Sarah Squires	134 Chesapeake Harbor	Literature Appropriation for Brackens
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Vernon's Annotated Missouri Statutes

Title XXXVIII. Crimes and Punishment; Peace Officers and Public Defenders [Chs. 556-600]

Chapter 573. Pornography and Related Offenses (Refs & Annos)

Explicit Sexual Material Offense

V.A.M.S. **573.550**

**573.550. Providing explicit sexual material to a student, offense of--penalty--definitions**

Effective: August 28, 2022

Currentness

1. A person commits the offense of providing explicit sexual material to a student if such person is affiliated with a public or private elementary or secondary school in an official capacity and, knowing of its content and character, such person provides, assigns, supplies, distributes, loans, or coerces acceptance of or the approval of the providing of explicit sexual material to a student or possesses with the purpose of providing, assigning, supplying, distributing, loaning, or coercing acceptance of or the approval of the providing of explicit sexual material to a student.

2. The offense of providing explicit sexual material to a student is a class A misdemeanor.

3. As used in this section, the following terms shall mean:

(1) "**Explicit sexual material**", any pictorial, three-dimensional, or visual depiction, including any photography, film, video, picture, or computer-generated image, showing human masturbation, deviate sexual intercourse as defined in section 566.010, sexual intercourse, direct physical stimulation of genitals, sadomasochistic abuse, or emphasizing the depiction of postpubertal human genitals; provided, however, that works of art, when taken as a whole, that have serious artistic significance, or works of anthropological significance, or materials used in science courses, including but not limited to materials used in biology, anatomy, physiology, and sexual education classes shall not be deemed to be within the foregoing definition;

(2) "**Person affiliated with a public or private elementary or secondary school in an official capacity**", an administrator, teacher, librarian, media center personnel, substitute teacher, teacher's assistant, student teacher, law enforcement officer, school board member, school bus driver, guidance counselor, coach, guest lecturer, guest speaker, or other nonschool employee who is invited to present information to students by a teacher, administrator, or other school employee. Such term shall not include a student enrolled in the elementary or secondary school.

**Credits**

(L.2022, S.B. Nos. 775, 751 & 640, § A, eff. Aug. 28, 2022.)

**V. A. M. S. 573.550, MO ST 573.550**

Statutes are current through the end of the 2023 First Regular Session of the 102nd General Assembly. Constitution is current through the November 8, 2022 General Election.

WESTLAW CLASSIC

NOTES OF DECISIONS (23)

- Community standards
- Double jeopardy
- Privacy
- Prurient appeal
- Redeeming value
- Review
- Test
- Validity
- Weight and sufficiency of evidence

West's Annotated Indiana Code  
Title 35. Criminal Law and Procedure

35-49-2-1 Obscene matter or performance  
IN ST 35-49-2-1 West's Annotated Indiana Code Title 35. Criminal Law and Procedure (Approx. 2 pages)

[ IC 35-49-2-1  
[ 35-49-2-1 Obscene matter or performance  
Currentness

Sec. 1. A matter or performance is obscene for purposes of this article if:

- (1) the average person, applying contemporary community standards, finds that the dominant theme of the matter or performance, taken as a whole, appeals to the prurient interest in sex;
- (2) the matter or performance depicts or describes, in a patently offensive way, sexual conduct; and
- (3) the matter or performance, taken as a whole, lacks serious literary, artistic, political, or scientific value.

Credits  
As added by P.L.311-1983, SEC.33.

Notes of Decisions containing your search terms (0) [View all 23](#)

[ I.C. 35-49-2-1, IN ST 35-49-2-1  
The statutes and Constitution are current with all legislation of the 2023 First Regular Session of the 123rd General Assembly effective through July 1, 2023.



## WESTLAW CLASSIC

West's Annotated Indiana Code  
Title 35. Criminal Law and Procedure

**35-49-2-2 Matter or performance harmful to minors**

IN ST 35-49-2-2 West's Annotated Indiana Code Title 35. Criminal Law and Procedure (Approx. 2 pages)

IC 35-49-2-2

**35-49-2-2 Matter or performance harmful to minors**

Currentness

Sec. 2. A matter or performance is harmful to minors for purposes of this article if:

- (1) it describes or represents, in any form, nudity, sexual conduct, sexual excitement, or sado-masochistic abuse;
- (2) considered as a whole, it appeals to the prurient interest in sex of minors;
- (3) it is patently offensive to prevailing standards in the adult community as a whole with respect to what is suitable matter for or performance before minors; and
- (4) considered as a whole, it lacks serious literary, artistic, political, or scientific value for minors.

**Credits**

As added by P.L.311-1983, SEC.33.

**Notes of Decisions (14)**

I.C. 35-49-2-2, IN ST 35-49-2-2

The statutes and Constitution are current with all legislation of the 2023 First Regular Session of the 123rd General Assembly effective through July 1, 2023.

**NOTES OF DECISIONS (14)**

In general  
Construction with other laws  
Validity  
Weight and sufficiency of evidence



**MINUTES  
GENERAL OPERATIONS COMMITTEE  
DAVID KLEIN, CHAIRMAN  
NOVEMBER 6, 2023**

**Present:**

David Klein, Chairman  
Chrissi Miller, Vice-Chairman  
Mark Harrison  
Deborah Holmes  
Tim Jones  
Terry Moss  
Don Schmit

**Also Present:**

John Isbell, County Mayor  
Eric Sitler, Law Director  
Steve Weiner, Staff Attorney  
Merrol Hyde, Commission Chairman  
Jennifer Mitchell, minute taker

Chairman Klein brought the regular scheduled meeting of the General Operations Committee to order with an invocation on Monday, November 6, 2023, at 7:00 p.m. in the Sumner County Administration Building. Chairman Klein declared a quorum present to conduct business.

3. Approval of Agenda.

Without objection, Chairman Klein added additional office space for Finance Department as item 9b.

Comm. Miller moved, seconded by Comm. Jones, to approve the agenda as amended. The motion carried unanimously.

4. Approval of the Minutes of October 2, 2023.

Upon motion of Comm. Schmit, seconded by Comm. Harrison, the Committee unanimously voted to approve the minutes of October 2, 2023.

5. Report of Chairman. No report

6. Report of County Mayor. County Mayor John Isbell reported on old business items. Moving forward with engineer on archives building roof. Architect/Engineer working on design for jail roof. Courthouse parking structure is slated to open in June 2024. Draper House roof repairs completed.

7. Recognition of the Public.

Gabby Cato of 205 Daleview Avenue, Gallatin thanked the Committee for taking on the parking issue at the Library in Gallatin. She spoke about the number of available spots along with the number of visitors.

Comm. Jones moved, seconded by Comm. Schmit, to suspend the rules to ask Ms. Cato questions about parking issues at the Gallatin Library.

Ater discussion, Chairman Klein brought the meeting back in session.

#### 8. Old Business.

a. Progress on Roof and Parapets of Archive Building.

County Mayor John Isbell addressed under his report.

Chairman Klein asked for this item to be removed from the agenda.

b. Progress on Roof of Sumner County Jail – Statement of Intent to Move Forward.

County Mayor Isbell addressed under his report.

Chairman Klein asked for this item to be removed from the agenda.

c. Update on New Courthouse and Parking Structure.

County Mayor Isbell addressed under his report.

After discussion, Chairman Klein stated he would work on a plan for library parking and asked to keep this item on the agenda going forward.

d. Securing the Draper House – What progress has been made?

Tracy Finegan confirmed the roof repairs completed and doors have been installed.

Chairma Klein asked for this item to be removed from the agenda.

#### 9. New Business.

a. Documentation relating to Historic Brown House.

County Mayor Isbell gave the history of the Brown house and explained the schools are supposed to remove the bricks, the addition and preserve the house. Law Director Eric Sitler explained it is held in an extensive trust.

b. Additional Offices for Finance Department.

Chairman Klein moved, seconded by Comm. Miller to discuss. The motion carried unanimously.

Chairman Klein explained the Finance Department will add additional position(s) for the Opioid Abatement settlements and will bring purchasing for Highway Department in office and would like to close in office space. Estimate for build-out attached.

Comm. Miller moved, seconded by Comm. Jones, to approve up to \$20,000.00 for the buildout and forward to Budget Committee. The motion carried unanimously.

10. Adjournment. Upon motion of Comm. Miller and seconded by Comm. Jones, the Committee adjourned at 7:42 p.m.

Prepared by Jennifer Mitchell

# General Operations

## RECOGNITION OF THE PUBLIC

\*\*\*SPEAK ONLY TO ITEMS ON THE AGENDA\*\*\*

MEETING DATE: 11-6-2023

	NAME	COMPLETE ADDRESS & TELEPHONE #	AGENDA ITEM
1	Gabby Cato	205 Daleview Ave, Gallatin	court house parking
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**Offices 1 & 2**

11/6/23

	Quan.		Cost/Item	Total
Remove Cabinets	<del>3</del> 3	Each	\$ 100.00	\$ 300.00
New Wall	12	L.F.	\$ 35.00	\$ 420.00
Drywall Patch	1	Each	\$ 100.00	\$ 100.00
Paint	840	S.F.	\$ 1.50	\$ 1,260.00
Floor Repair	1	Each	\$ 1,000.00	\$ 1,000.00
Move Lighting	2	Each	\$ 350.00	\$ 700.00
HVAC	1	Each	\$ 500.00	\$ 500.00
Misc. Elect.	4	Each	\$ 200.00	\$ 800.00
				<b>\$ 5,080.00</b>

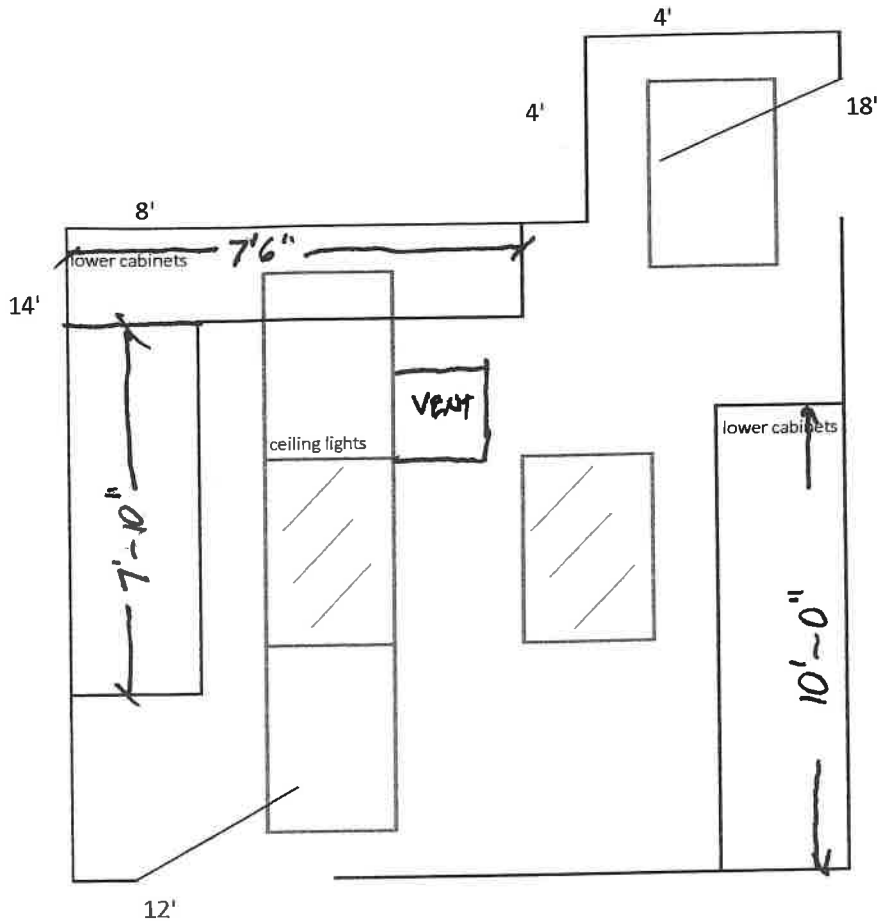
**Storage Area**

	Quan.		Cost/Item	Total
Install Cabinets	3	Each	\$ 200.00	\$ 600.00
Drywall Patch	1	Each	\$ 100.00	\$ 100.00
Paint	660	S.F.	\$ 1.50	\$ 990.00
Floor Repair	1	Each	\$ 500.00	\$ 500.00
				<b>\$ 2,190.00</b>

**Offices 3 & 4**

	Quan.		Cost/Item	Total
New Wall	53	L.F.	\$ 35.00	\$ 1,855.00
Drywall Patch	1	Each	\$ 100.00	\$ 100.00
Prehung Doors	2	Each	\$ 500.00	\$ 1,000.00
Paint	530	S.F.	\$ 1.50	\$ 795.00
Floor Repair	1	Each	\$ 100.00	\$ 100.00
Move Lighting	2	Each	\$ 350.00	\$ 700.00
HVAC	1	Each	\$ 500.00	\$ 500.00
Misc. Elect.	4	Each	\$ 200.00	\$ 800.00
				<b>\$ 5,850.00</b>

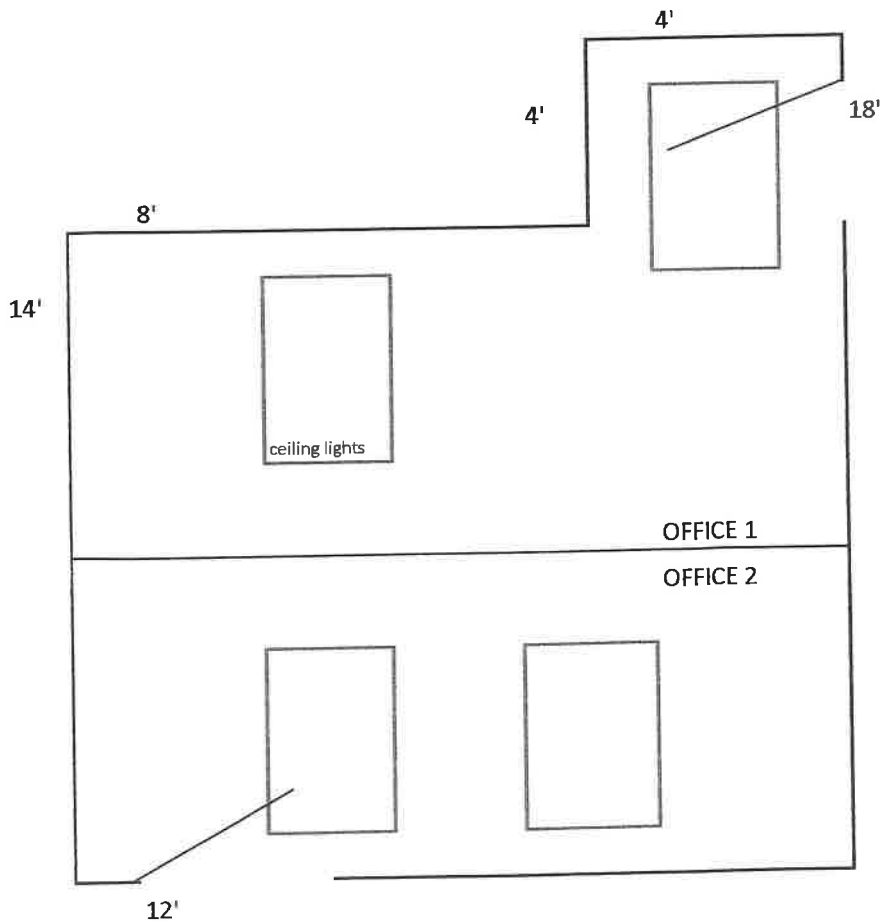
## CURRENT FINANCE WORKROOM CONFIGURATION (all measurements are approximate)



### TO ACCOMPLISH REMOD:

1. remove all cabinets
2. remove lights with hashes
3. add wall to divide space
4. add light in Office 2
5. repair flooring under cabinets
6. repair drywall behind cabinets
7. paint walls
8. not sure of electrical needs
9. not sure of hvac needs

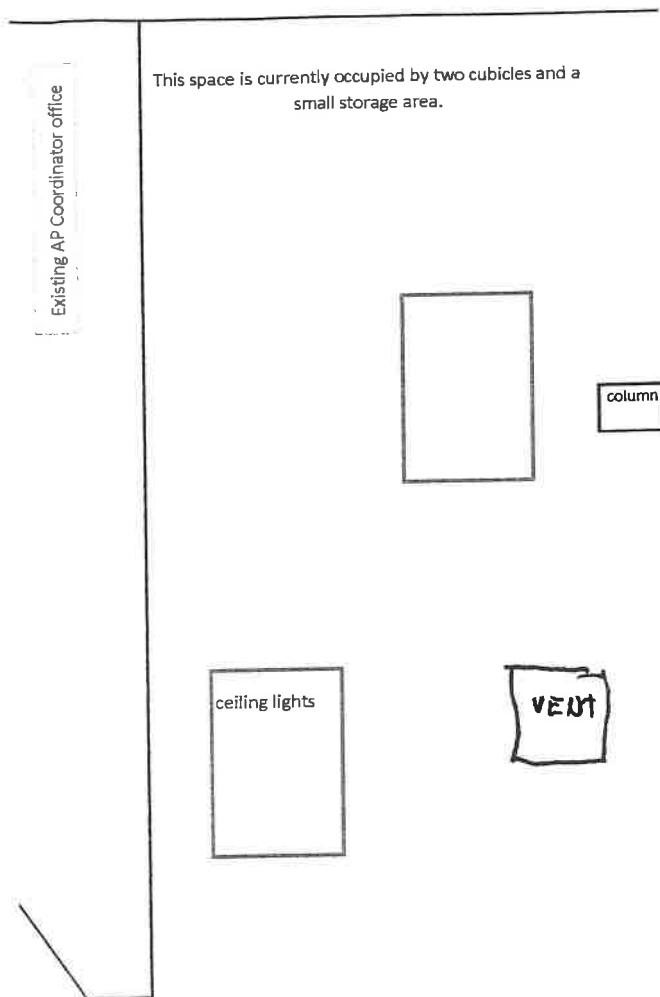
## PROPOSED FINANCE WORKROOM CONFIGURATION



## CURRENT FINANCE ACCOUNTS PAYABLE

### AREA CONFIGURATION

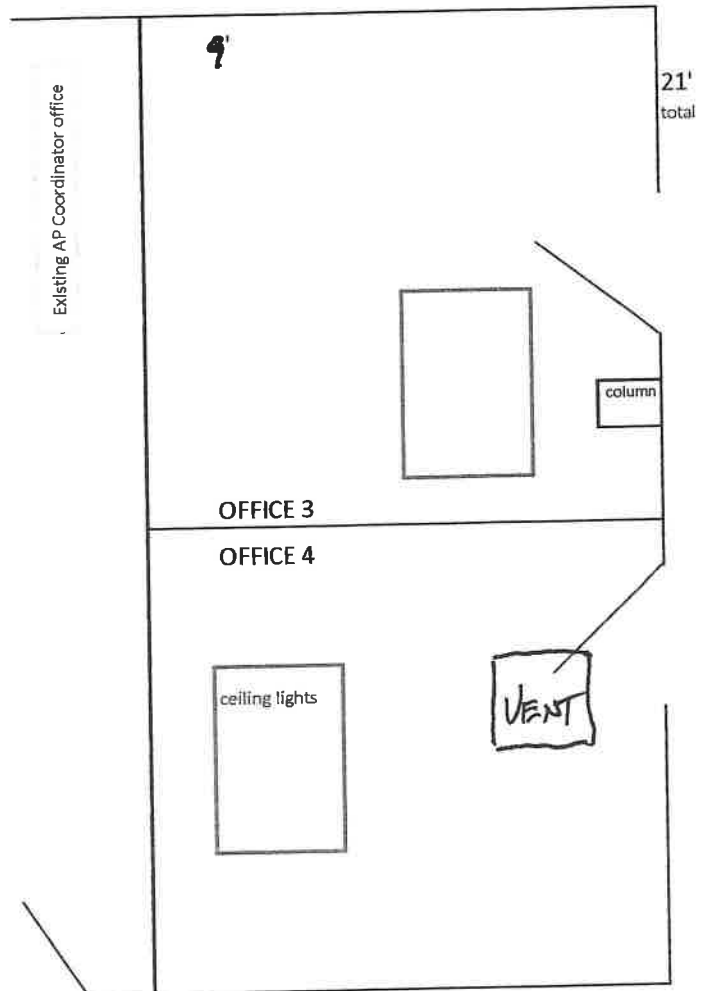
(all measurements are approximate)



## PROPOSED FINANCE ACCOUNTS PAYABLE

### AREA CONFIGURATION

(all measurements are approximate)



#### TO ACCOMPLISH REMOD:

1. Remove existing cubicles
2. Add office walls
3. Repair existing walls
4. Paint
5. not sure of electrical needs
6. not sure of hvac needs
7. not sure of additional lighting needs

**MINUTES  
HEALTH & EMERGENCY SERVICES COMMITTEE  
CHAIRMAN, DARRELL ROGERS  
NOVEMBER 6, 2023**

**Present:**

Dr. Mary Genung, Vice-Chairman  
Terri Boyt  
Shannon Burgdorf  
Benjamin A. Harris  
Tim Jones  
Terry Wright, arrived late  
**Absent:**  
Darrell Rogers, Chairman

**Also Present:**

John Isbell, County Mayor  
Eric Sitler, Law Director  
Steve Weiner, Staff Attorney  
Merrol Hyde, Commission Chairman  
Jennifer Mitchell, minute taker

Vice-Chairman Genung called the regular meeting of the Health and Emergency Services Committee to order with an invocation by Commissioner Burgdorf on Monday, November 6, 2023, at 5:00 p.m. in the Sumner County Administration Building. A quorum was present.

3. Approval of Agenda.

Vice-Chairman Genung added Goodlettsville ambulance service as item b under new business. She also added discussion of return of EMS/EMA/ECC reports to the agenda, Hazardous Mitigation and removal of Volunteer Fire from the agenda under old business.

Comm. Boyt moved, seconded by Comm. Jones, to approve the agenda as amended. The motion carried unanimously.

4. Approval of the Minutes of October 2, 2023.

Upon motion of Comm. Harris, seconded by Comm. Burgdorf, the Committee voted to approve the minutes from October 2, 2023.

5. Recognition of the Public.

Jeremy Mansfield of 105 Copper Creek Dr, Goodlettsville explained he was contacted by the City Manager of Goodlettsville and requested discussion about Goodlettsville ambulance service be added to the agenda. He further explained that the City Manager asked if the County had an interest in adding an ambulance in the Mansker Creek area if Goodlettsville provided the space in a possible new fire hall.

Commissioner Terry Wright arrived.

6. Report of the Chairman. No report

7. Report of the County Mayor.

County Mayor Isbell gave a brief overview of ECC monthly reports and notified the Committee that E911 Director Christie Davis has resigned. Mr. Isbell appointed Michael Guthrie as interim director. Reports attached.

Commissioner Boyt asked for revenue versus expenses report by location and a breakdown of call volume by location from EMS. Mrs. Boyt also asked for a trend analysis and map of locations with coverage area.

8. Report of the Sheriff. Not present

9. Report of the Fire Department. Not present

10. Old Business.

a. Sheriff's Office Policies – Discussion/Question and Answer.

Vice-Chairman Genung moved, seconded by Comm. Wright, to defer to December and request the Sheriff or Sheriff Chief Deputy attend December's meeting. The motion carried unanimously.

b. Hazard Mitigation

Comm. Harris moved, seconded by Comm. Burgdorf, to approve and forward to the Legislative Committee. The motion carried unanimously.

c. Request return EMS/EMA/ECC as Agenda Items and a representative attend meetings.

Comm. Boyt moved, seconded by Comm. Burgdorf, to discuss. The motion carried unanimously.

After discussion, Comm. Jones moved, seconded by Comm. Boyt, to call for question. The Committee approved the call for question (5-1-0). Comm. Harrison voted against.

The Committee approved the motion to request the return of EMS/EMA/ECC to the agenda and request a representative attend the meetings (5-1-0). Comm. Harris voted against.

d. Remove Volunteer Fire Departments from Agenda.

Comm. Jones moved, seconded by Comm. Harris, to discuss. The motion carried unanimously.

After discussion, Comm. Boyt moved, seconded by Comm. Burgdorf, to remove the Volunteer Fire Department report from the agenda going forward. The motion carried unanimously.

11. New Business

a. Appointment of citizen member of the Animal Control Ad-hoc Committee.

Comm. Jones moved, seconded by Comm. Boyt, to add Diana Townsend, citizen, to the Animal Control ad hoc Committee. The motion carried (5-1-0). Comm. Wright voted against.

Comm. Jones moved, seconded by Comm. Boyt, to add a second citizen to the Animal Control ad hoc Committee. The motion carried (5-1-0). Comm. Wright voted against.

b. Goodlettsville Ambulance Service.

Comm. Burgdorf moved, seconded by Comm. Harris, to discuss. The motion carried unanimously.

Vice-Chairman Genung moved, seconded by Comm. Burgdorf, to suspend the rules to allow Comm. Mansfield to answer questions. The motion carried unanimously.

Comm. Mansfield clarified the Goodlettsville City Manager discussed with him about the possibility of Goodlettsville building a new fire hall near Moss Wright Park and asked if the County had an interest in housing an ambulance if the bay is provided.

After discussion, Comm. Harris moved, seconded by Comm. Boyt, to ask County Mayor Isbell and EMS Chief Poss to discuss feasibility with City of Goodlettsville. The motion carried unanimously.

Vice-Chairman Genung asked to move this item to old business for next month's meeting.

12. Adjournment. Vice-Chairman Genung declared the meeting adjourned at 5:47 p.m. upon motion by Comm. BUrgdorf and seconded by Comm. Jones.

Prepared by Jennifer Mitchell

# Health + Emergency Services

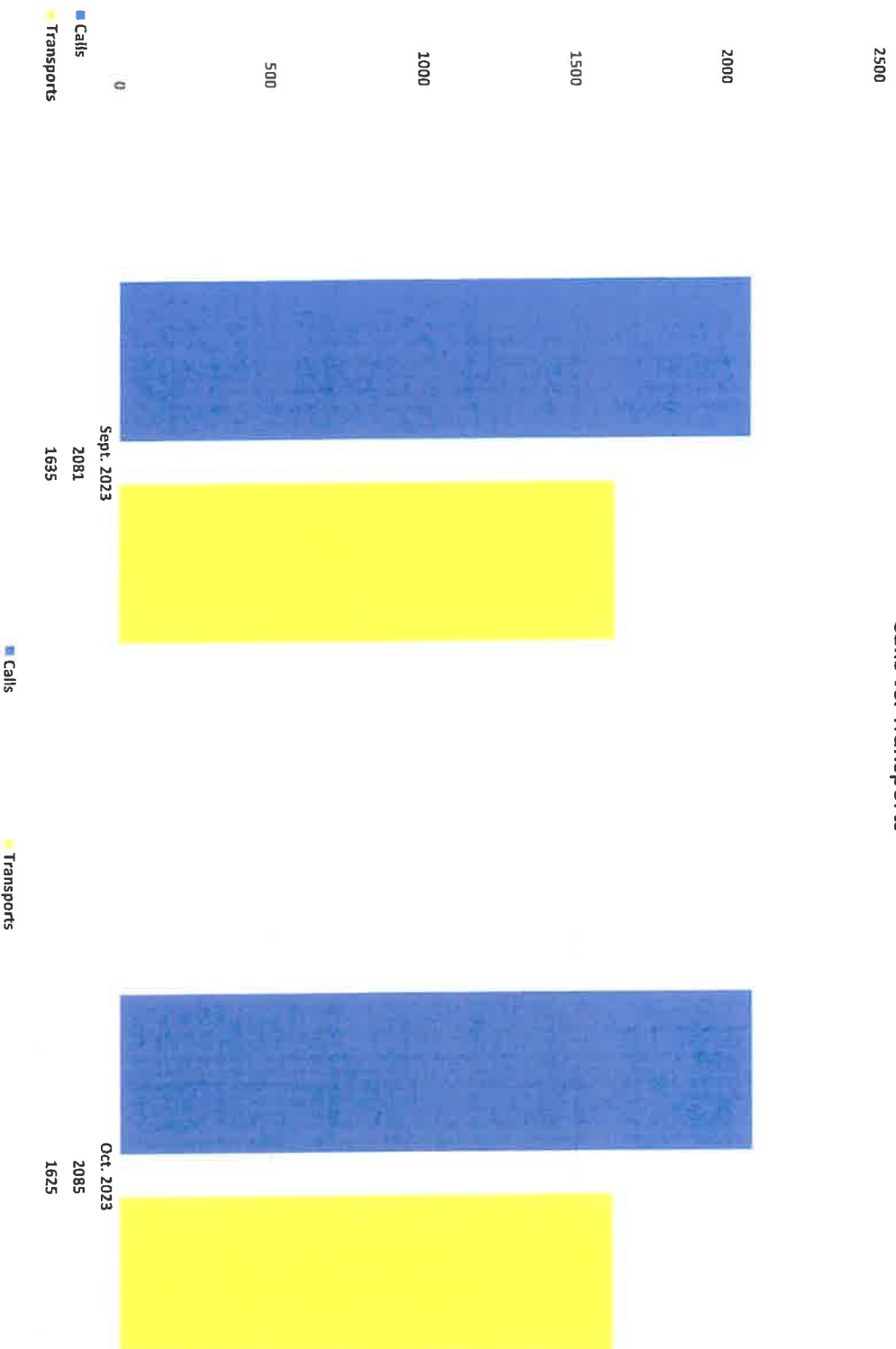
## RECOGNITION OF THE PUBLIC

\*\*\*SPEAK ONLY TO ITEMS ON THE AGENDA\*\*\*

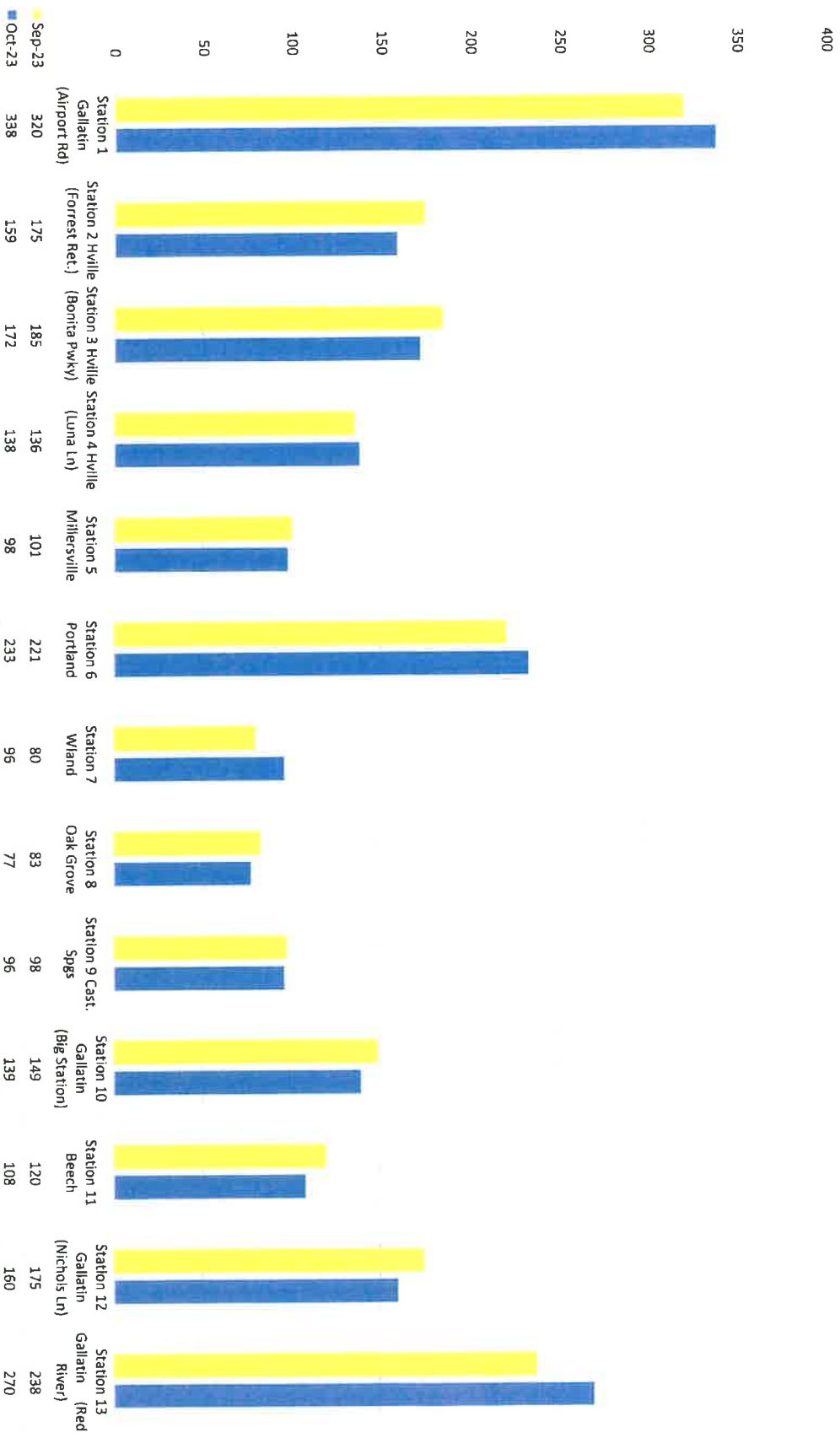
MEETING DATE: 11-16-2023

	NAME	COMPLETE ADDRESS & TELEPHONE #	AGENDA ITEM
1	JEREMY MANFRED	105 COPPER CREEK DR. GOSHUTE NV	743772
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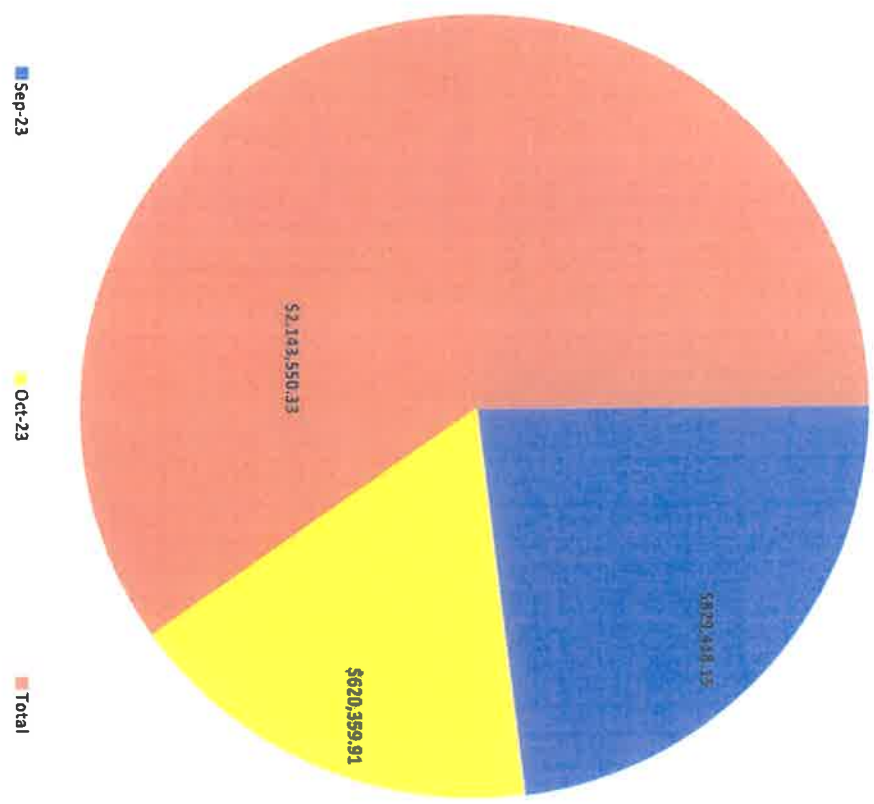
### Calls vs. Transports



# September/October 2023 Call Volume

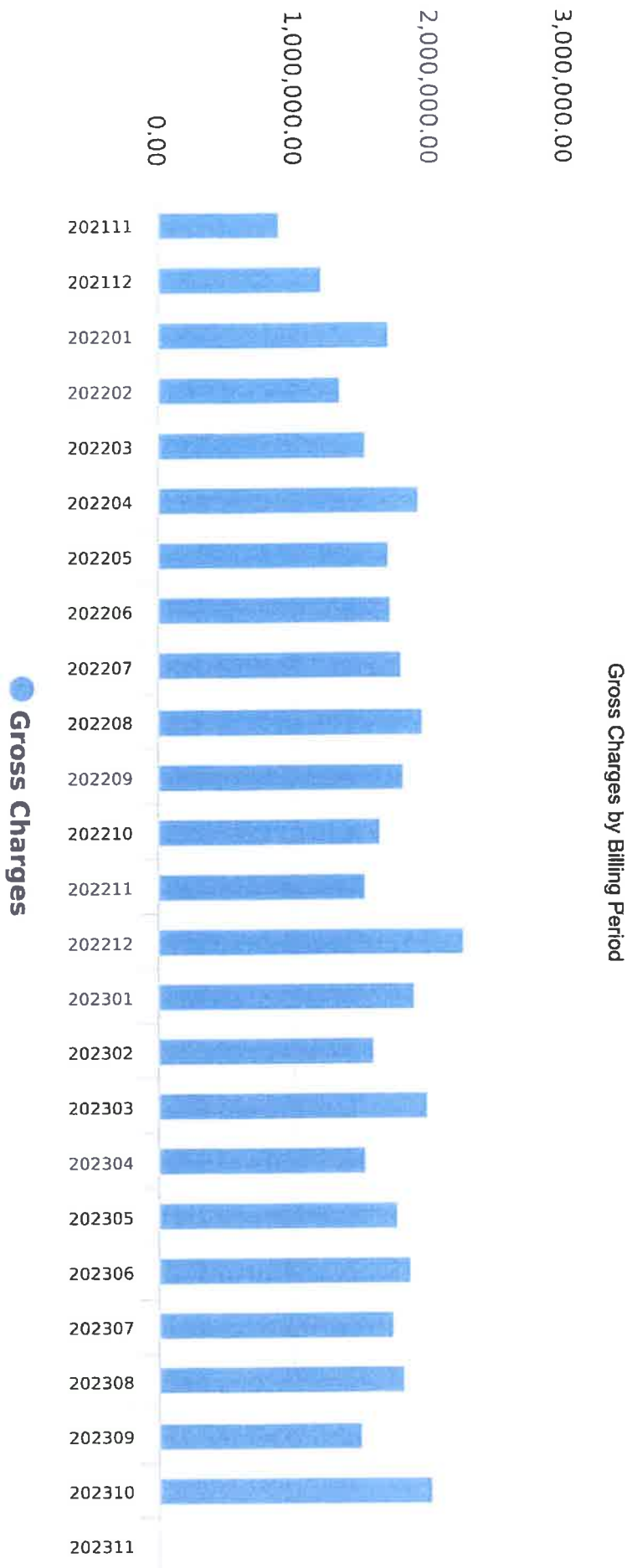


FY2023-24 EMS Revenue



Responded Out of Sumner County	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May 2023	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23
Robertson	33	15	16	20	18	25	23	24	7	13
Macon	1	4	1	2	3	3	2	0	1	1
Trousdale	0	0	0	2	0	1	0	0	0	1
Wilson	0	0	0	0	0	0	0	0	0	0
Davidson	0	12	19	0	0	2	1	0	0	0
<b>TOTAL</b>	<b>34</b>	<b>31</b>	<b>36</b>	<b>24</b>	<b>21</b>	<b>31</b>	<b>26</b>	<b>24</b>	<b>8</b>	<b>15</b>

Responded into Sumner County	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May 2023	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23
Robertson	33	43	43	46	41	34	27	34	38	31
<b>TOTAL</b>	<b>33</b>	<b>43</b>	<b>43</b>	<b>46</b>	<b>41</b>	<b>34</b>	<b>27</b>	<b>34</b>	<b>38</b>	<b>31</b>



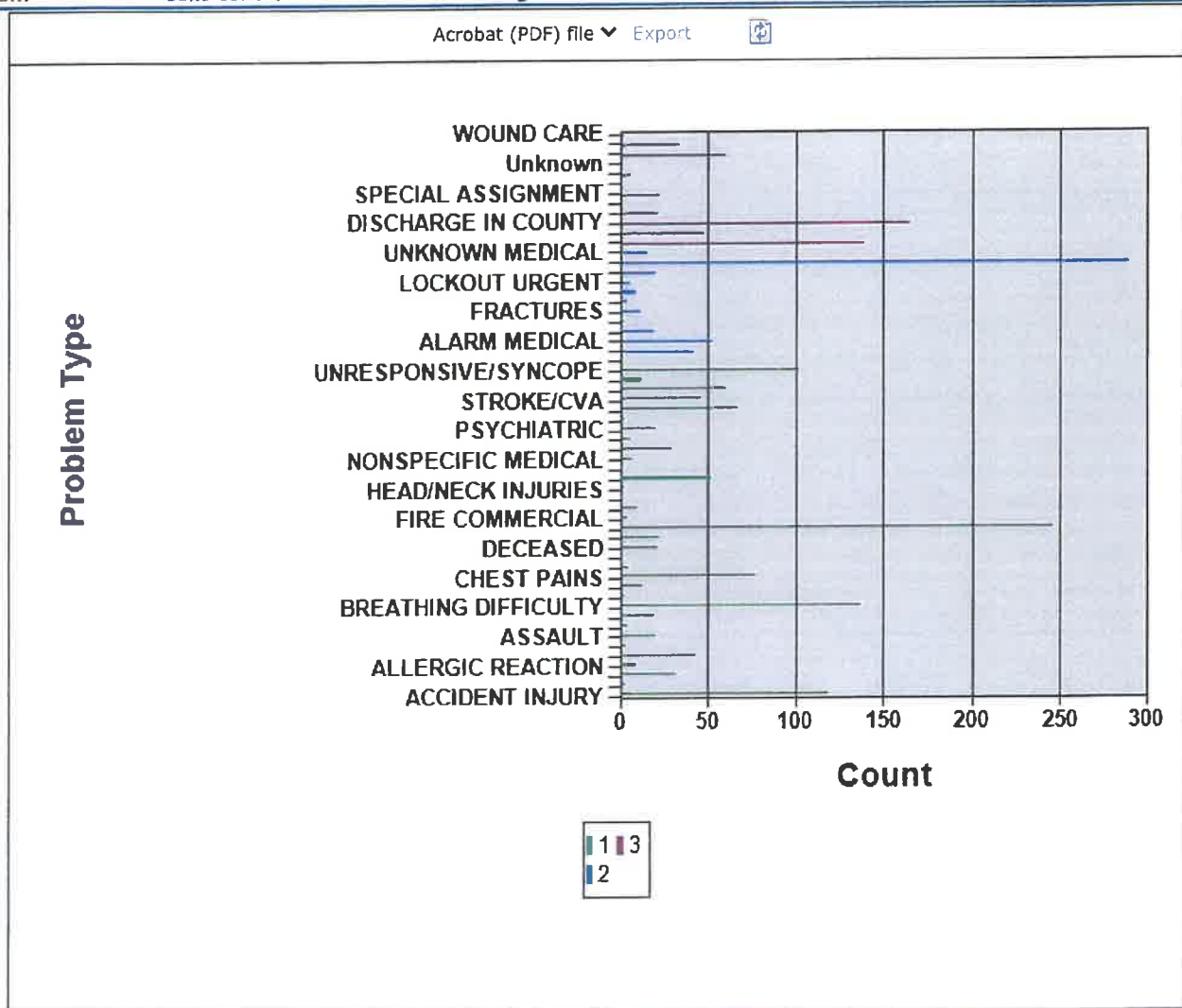
As of 11-06-2023

Problem Type Summary

2:29 PM 11/6/2023

Data Source: Data Warehouse

Agency:	EMS
Division:	DAVIDSON COUNTY EMS, PERSONNEL EMS, ROBERTSON COUNTY EMS, SUMNER COUNTY EMS
Day Range:	Date From 10/1/2023 To 10/31/2023
Exclusion:	<ul style="list-style-type: none"> <li>• Calls canceled before first unit assigned</li> </ul>



Priority	Description
1	1
2	2
3	3

Problem Type	1	2	3	Total
Unknown			1	1
ABDOMINAL PAIN		42		42
ACCIDENT INJURY	119			119
ACCIDENT INJURY HIT/RUN	3			3
ACCIDENT SERIOUS INCIDENT	32			32
ACTIVE SHOOTER				
ADMINISTRATIVE INVESTIGATION				
AIRCRAFT EMERGENCY				
ALARM MEDICAL		53		53
ALLERGIC REACTION	9			9

ALS INTERFACILITY TRANSPORT		139	139
ALTERED MENTAL	43		43
ANIMAL BITE	3		3
ASSAULT	20		20
ASSIST OTHER AGENCY - EMA	4		4
BACK PAIN		19	19
BLEEDING NONTRAUMATIC	19		19
BLS INTERFACILITY TRANSPORT		48	48
BLS TRANSPORT			
BREATHING DIFFICULTY	137		137
BURNS	2		2
CARBON MONOX/INHALATION/HAZMAT			
CARDIAC ARREST	13		13
CHEST INJURY			
CHEST PAINS	77		77
CHOKING	5		5
COLD INJURY	1		1
DECEASED	21		21
DIABETIC	22		22
DIALYSIS IN COUNTY			
DIALYSIS OUT OF COUNTY			
DISCHARGE IN COUNTY		165	165
DISCHARGE OUT OF COUNTY		21	21
DRILL		1	1
DROWNING/NEAR-DROWNING			
ELECTROCUTION/LIGHTNING			
EYE PROBLEMS/INJURY		2	2
FALLS	246		246
FIRE COMMERCIAL	4		4
FIRE RESIDENTIAL	10		10
FIRE VEHICLE			
FLU SYMPTOMS			
FRACTURES		12	12
GAS LEAK			
GI BLEED		4	4
GUNSHOT WOUND	1		1
HANGING			
HAZMAT			
HEAD/NECK INJURIES	2		2
HEADACHE			
HEART PROBLEMS	52		52
HEAT PROBLEMS	1		1
LACERATION		9	9
LOCKOUT URGENT		6	6
NAUSEA/VOMITING		20	20
NONSPECIFIC MEDICAL	7		7
OUTPATIENT ADMIT IN COUNTY			
OUTPATIENT ADMIT OUT OF COUNTY			
OVERDOSE	29		29
POISONING			
PREGNANCY/CHILDBIRTH	6		6
PSYCHIATRIC	20		20
RESCUE			
RESCUE ANGLE HIGH-LOW			
RESCUE SWIFT WATER			
RESCUE TRENCH			
RESPIRATORY/BREATHING PROBLEMS	2		2
SEIZURES	67		67
SEXUAL ASSAULT			
SICK/GENERAL WEAKNESS		290	290
SPECIAL ASSIGNMENT		22	22
SPECIAL ASSIGNMENT - COMMUNITY		1	1
STABBING			
STROKE/CVA	46		46
SUICIDAL SUBJECT	60		60

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TALK TO SUPERVISOR  
 TEST CALL  
 TRAIN DERAILMENT  
 TRAUMA  
 UNKNOWN MEDICAL  
 UNRESPONSIVE/SYNCOPE  
 VENT TRANSPORT  
 WAIT AND RETURN IN COUNTY  
 WAIT AND RETURN OUT OF COUNTY  
 WATER EMERGENCY  
 WEATHER RELATED ISSUES  
 WOUND CARE  
 ZASSIST LAW

Total

		6	6
12			12
	16		16
102			102
		60	60
		34	34
1			1
		2	2
1198	473	500	2171

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# SUMNER COUNTY TENNESSEE



## MULTI JURISDICTION HAZARD MITIGATION PLAN

**2017**

**Prepared By:**

**Sumner County Hazard Mitigation Committee  
Sumner County Emergency Management**

**Tennessee Emergency Management Agency  
*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. Money spent mitigating potential impacts of a disaster event can result in substantial savings of life and property. The Disaster Mitigation Act of 2000 calls for local governments to develop mitigation plans (*44 CFR 201*). In 2005, the Multihazard Mitigation Council (MMC) conducted a widely cited study, *Natural Hazard Mitigation Saves*, which documented that every \$1 spent on mitigation saves society an average of \$4.

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 successfully 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 2017 Sumner County Hazard Mitigation Plan was created to act as a well thought-out guide to be used by, and for, the people of Sumner County. For this plan to be successful, each jurisdiction within the county participated in the drafting and preparation of the plan. These participating jurisdictions include:

- Sumner County
- City of Gallatin
- City of Goodlettsville
- City of Hendersonville
- City of Millersville
- Sumner County Board of Education
- Volunteer State Community College
- City of Mitchellville
- City of Portland
- City of Westmoreland
- City of White House

In reference to federal code title *44 CFR 201*, the plan is required to be submitted to both TEMA (State) and FFMA (Federal) for review to be approved. 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

The previous Sumner County Hazard Mitigation Plan was approved by FEMA on February 17, 2011. 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. To ensure that risks are regularly re-evaluated and mitigation projects continue to effectively reduce community vulnerabilities, Sumner County reviews the mitigation plan annually and updates the plan at least every 5 years.

On September 6, 2016 e mail notification was made to all Mayors, the Sumner County Board of Education and Volunteer State Community College giving them the choice of either participating in and eventually adopting the county's plan or writing their own and including it as an annex to the county plan before being submitted for approval. Also, they were asked to appoint a representative from their municipality to serve on the Sumner County Interagency Hazard Mitigation Plan Team.

The following municipalities chose to participate in the planning and adopt the County Hazard Mitigation Plan. (See Appendix 1)

- County Of Sumner
- City Of Gallatin
- City Of Goodlettsville
- City Of Hendersonville
- City Of Millersville
- City Of Mitchellville
- City Of Portland
- City Of Westmoreland
- City Of White House
- Sumner County Board of Education
- Volunteer State Community College

**September 8, 2016.** Designated Hazard Mitigation Team members from all participating entities met at the Sumner County Emergency Operations Center. On this date, needs were identified and each municipality was tasked with gathering and reviewing information for the new plan.

The Sumner County Interagency Hazard Mitigation Plan Team members have worked throughout the process, from the time they were appointed to the final selection and development of the plan (see list of members below).

• Ken Weidner (Chairman)	Director, Sumner County Emergency Management
• Mickey Summers	Battalion Chief, Emergency Management Operations
• Paul Fornes	Chief Deputy, Sumner County Tax Assessors Office
• Keith Douglas	Director, Sumner County EMS
• Sam Clark	Assistant Director, Sumner County EMS
• Aaron Pickard	Chief Deputy, Sumner County Sheriff's Office
• Rodney Joyner	Director of Planning, Sumner County
• Marshall Wright	Director, Sumner County Building & Codes
• Tom Dale	Deputy Chief, City of Gallatin Fire Dept.
• Robert Richie	Battalion Chief, City of Gallatin Fire Department
• Billy Vahldiek	Lieutenant, City of Gallatin Police Dept.
• Zach Wilkinson	Director, City of Gallatin Public Works
• Bill McCord	City Planner, City of Gallatin
• Lori Smiley	CIO, City of Gallatin
• Kenneth Reeves	Chief, City of Goodlettsville Fire Department
• Steve Mills	Director, City of Hendersonville Building & Codes
• Janel Rogan	Commander, City of Hendersonville Police Department
• Michael Holt	Assistant Chief, City of Hendersonville Fire Department
• Brian Fann	Administrative Chief, City of Hendersonville Fire Dept.
• Al West	Chief, City of Portland Fire Department
• Anthony Heavner	Police Chief, City of Portland Police Department
• Carlton Cobb	Stormwater Program Manager, City of Portland
• Mark Loy	Captain, City of Millersville Fire Department
• Brandon Head	Codes Official, City of Millersville Fire Dept.
• Tim Farley	Codes Director, City of Westmoreland
• Ray Amalfitano	Chief, City of Westmoreland Police Department
• Mark Jenkins	Chief, City of Westmoreland Fire Department
• Bobby Worman	Mayor, City of Mitchellville
• Joe Palmer	Chief, City of White House Fire Department
• Gerald Herman	City Administrator, City of White House
• Pat Brady	Chief, City of White House Police Department
• Reed Hillen	Director, City of White House Planning and Codes
• Lisa Lynch	Advisor, Volunteer State Community College

***Sumner County Hazard Mitigation Plan***

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- Angela Lawson Police Chief, Volunteer State Community College
- Katie Brown Coordinator, Sumner County Board of Education
- Jason Erlewine Chief, Sumner County Volunteer Fire Department
- Debbie Ament deNunez DAT Member, American Red Cross
- Doyle Farris Pastor, Faith Based Representative
- Kevin Lloyd Project Manager, Hepaco, LLC

Sumner County Emergency Management continually leads the development, review and update process for the Sumner County Hazard Mitigation Plan. The regular five year update process kick-off meeting took place on September 8, 2016 (see [Appendix A](#) for meeting information). Sumner County Emergency Management coordinated directly with county and local officials to establish the Sumner County Hazard Mitigation Committee. Throughout the process, the Sumner County Hazard Mitigation Committee provided guidance and input for the plan and mitigation actions/projects. Sumner County Emergency Management ensured all county jurisdictions were represented by at least one person on the committee. The Sumner County Hazard Mitigation Committee consists of the following members:

The committee member's efforts in the development of the plan were broken down into two stages: the brainstorming/drafting stage and the reviewing stage. During the brainstorming/drafting stage the committee identified hazards, evaluated risks, calculated and located each jurisdiction's vulnerable areas, identified the county's critical facilities, determined the county's mitigation goals/objectives, created and sponsored mitigation projects, and prioritized those mitigation projects. Representatives from School Board participated in person, while Volunteer State Community College participated through phone calls and e-mails with the Committee Chairman throughout the process. During the review stage the committee evaluated the written drafts of the plan. Also, in this process each jurisdiction reviewed written drafts that specifically addressed aspects of their jurisdiction (i.e., each jurisdiction's individual risks and vulnerabilities).

The second Sumner County Hazard Mitigation Committee meeting was held on September 29, 2016] at the Sumner County Emergency Operations Center. At this meeting, the committee reviewed the previous plan, provided updates to the risk and vulnerability information and began to discuss potential projects. See [Appendix B](#) for meeting details.

### **Public Participation**

To encourage public involvement, the Sumner County Hazard Mitigation Committee advertised their third committee meeting for November 17, 2016 to the county and neighboring communities during a radio interview on local radio station 1010 WHIN on October 7, 2017 and again on November 14, 2016 on their Facebook page. These notices presented the purpose of the meeting, the time and date of the meeting, the exact location of the meeting, and stated

### ***Sumner County Hazard Mitigation Plan***

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that all are invited to attend. This meeting provided a great opportunity for the public to comment on the plan during drafting stages, to contribute in project proposals, and to participate in project prioritization. [Appendix C](#) provides a copy of the meeting and presents a copy of the public notice for the meeting.

All public feedback was recorded and considered by the Sumner County Hazard Mitigation Committee, who will continue public outreach and incorporation throughout all future planning processes. Upon receiving the “Approval Pending Adoption” designation from FEMA, the public will be given a chance to comment on the final draft of the plan prior to its adoption by each local jurisdiction. This opportunity will take place at a local elected board meeting for each jurisdiction before the 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 Sumner County Hazard Mitigation Plan. The primary purpose of reviewing this information was to identify local hazards, recognize local risks, and understand different local vulnerabilities. The following list identifies additional existing studies that were reviewed:

- Sumner County School Safety Plan
- Sumner County Basic Emergency Operations Plan (BEOP)
- Cities of Gallatin, Goodlettsville and Hendersonville Zoning Ordinance(s)
- Sumner County, Hendersonville, Gallatin and Goodlettsville Wolf Creek/Center Hill Dam failure response plan(s)
- 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

All of the listed plans, studies, and data sources were incorporated into the Sumner County Hazard Mitigation Plan. These sources developed the plan’s hazard, risk, and vulnerability assessment sections that in return led to the establishment of meaningful mitigation actions.

## Section 2: County Profile

### Development Trends

Sumner County is a county located in the U.S. state of Tennessee. As of the 2010 census, the population was 160,645.<sup>[2]</sup> Its county seat is Gallatin,<sup>[3]</sup> and its largest city is Hendersonville. The county is named for American Revolutionary War hero General Jethro Sumner. It is part of the Nashville-Davidson–Murfreesboro–Franklin, TN Metropolitan Statistical Area.



As of the census of 2000, there were 130,449 people, 48,941 households, and 37,048 families residing in the county. The population density was 246 people per square mile (95/km<sup>2</sup>). There were 51,657 housing units at an average density of 98 per square mile (38/km<sup>2</sup>). The racial makeup of the county was 91.49% White, 5.78% Black or African American, 0.29% Native American, 0.66% Asian, 0.03% Pacific Islander, 0.80% from other races, and 0.96% from two or more races. 1.76% of the population were Hispanic or Latino of any race.

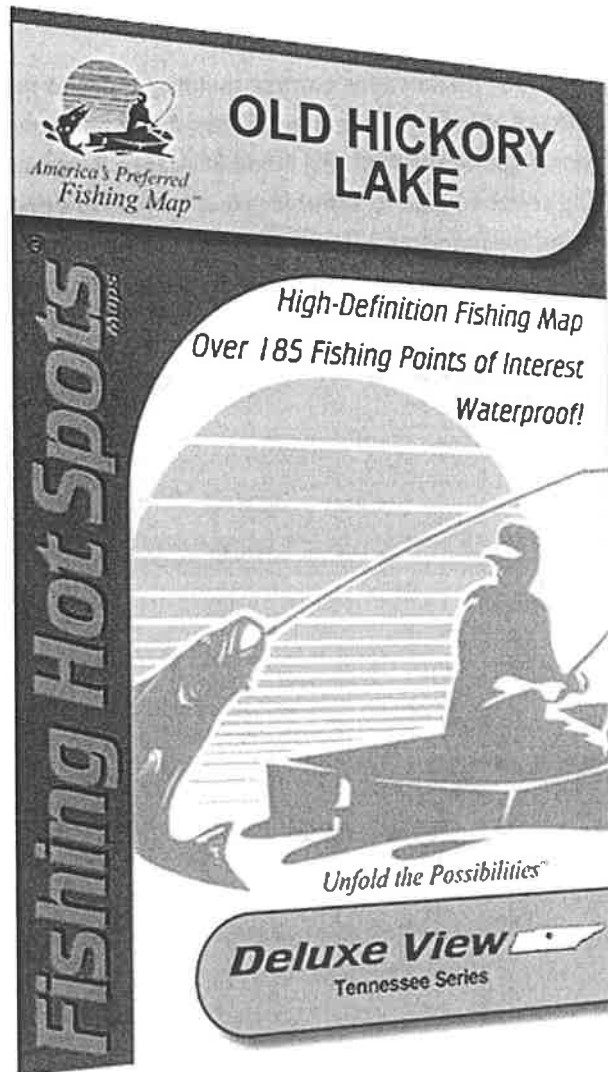
In 2000 there were 48,941 households out of which 36.30% had children under the age of 18 living with them, 61.10% were married couples living together, 10.80% had a female householder with no husband present, and 24.30% were non-families. 20.30% of all households were made up of individuals and 7.20% had someone living alone who was 65 years of age or older. The average household size was 2.64 and the average family size was 3.04.

In the county, the population was spread out with 26.30% under the age of 18, 8.00% from 18 to 24, 30.70% from 25 to 44, 24.30% from 45 to 64, and 10.70% who were 65 years of age or older. The median age was 36 years. For every 100 females there were 95.90 males. For every 100 females age 18 and over, there were 92.30 males.

The median income for a household in the county was \$46,030, and the median income for a family was \$52,125. Males had a median income of \$36,875 versus \$25,720 for females. The per capita income for the county was \$21,164. About 6.20% of families and 8.10% of the population were below the poverty line, including 10.50% of those under age 18 and 10.00% of those age 65 or over.

Future developments in Sumner County are estimated to continue. New development will more than likely take place in one of the industrial parks whose sites range from 10 acres to over 300 acres and are outside hazardous areas such as floodplains.

To counter any potential negative effects associated with future developments all jurisdictions are taking actions through instituting governmental planning mechanisms.



### Jurisdictional Capabilities

Currently, all jurisdictions enforce building codes to make sure structures are built in accordance to national standards. Sumner County, Cities and Towns enforce floodplain ordinances as part of adopting into the National Flood Insurance Program (NFIP). Additionally, all jurisdictions have zoning codes to lead to sensible growth and land development patterns. These instituted planning mechanisms help guide growth away from floodplains and other identified hazardous areas, thus reducing vulnerabilities to the jurisdictions.

### Legal & Regulatory Capability

Regulatory Tools/Plans	Regulatory Type: Ordinance Resolution Codes Plans, Etc.	Sumner County	City of Gallatin	City of Goodlettsville	City of Hendersonville	City of Millersville	City of Mitchellville	City of Portland	City of Westmoreland	City of White House
Building Codes	Municipal Code	Y	Y	Y	Y	Y	Y	Y	Y	
Zoning		Y	Y	Y	Y	Y	Y	Y	Y	
Emergency Response Plan	Basic Emergency Operations Plan (BEOP)	Y	Y	Y	Y	Y	Y	Y	Y	
National Flood Insurance Program Participant		Y	Y	Y	Y	Y	Y	Y	Y	
Post-Disaster Recovery Plan	BEOP	Y	Y	Y	Y	Y	Y	Y	Y	

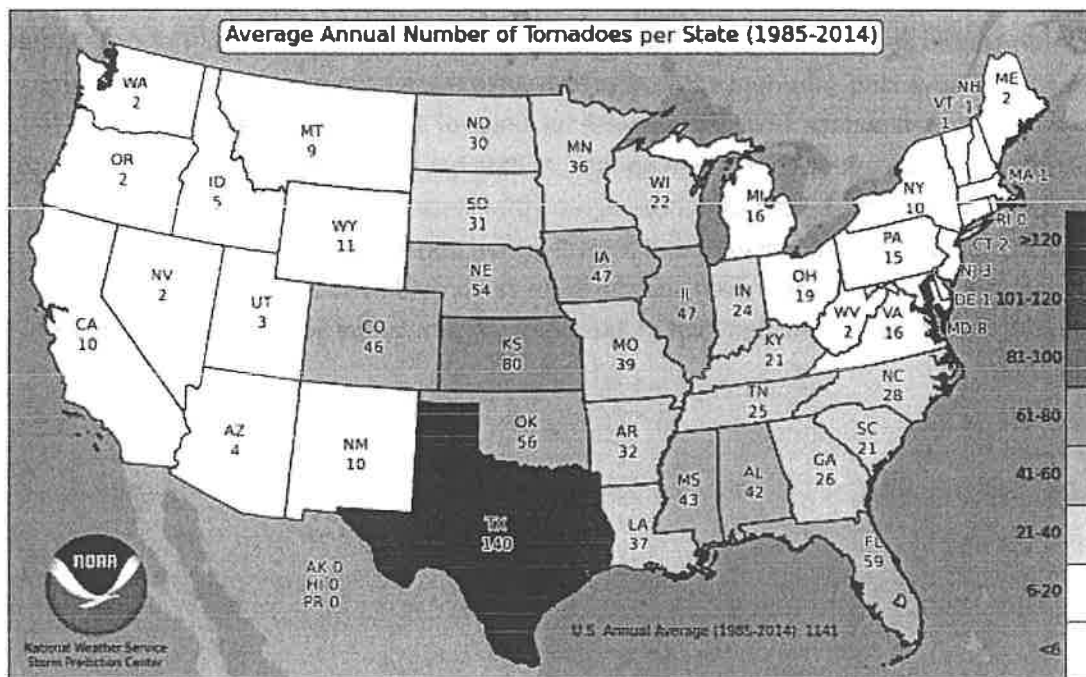
## Section 3: Risk Assessment

To assess Sumner 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 Sumner County using Sumner County Emergency Management records, researching news sources and recalling personal experiences. From there Emergency Management staff also analyzed hazard events that could occur in the county by reviewing scientific studies and consulting the State of Tennessee Hazard Mitigation Plan. The Committee agreed to remove land subsidence from the Plan since there have been no major incidents since the last Plan update. In alignment with the State of Tennessee Hazard Mitigation Plan, sinkholes were not added to this Plan update, as data has only recently become available to the State on this hazard. The Committee agreed that since there have been limited minor incidents. Sinkholes would be excluded from this Plan update until the State Hazard Mitigation Plan has been approved and the State can provide additional guidance. The following hazards have been identified as hazards of concern by the Sumner County mitigation committee.

## 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  $\frac{3}{4}$  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).

### Annual Average Tornadoes by State (1985-2014)



<b>Human</b>	
<i>Risk of injuries and deaths from the hazard</i>	
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

<b>Property</b>	
<i>Amount of residential property damage associated from the hazard</i>	
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

<b>Business</b>	
<i>Amount of business damage associated from the hazard</i>	
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

<b>Probability</b>	
<i>Likelihood of the hazard occurring within a given span of years</i>	
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

Sumner County's Hazard Mitigation Committee ranked tornadoes as the top priority risk for all jurisdictions:

Event: Tornado	Human 1-5	Property 1-5	Business 1-5	Sub-Total	Probability 1-5	Risk Score = [(H+P+B)/3] + P	66.0
Sumner County	4	5	4	4.33	3	7	
City of Gallatin	4	5	4	4.33	3	7	
City of Goodlettsville	4	5	4	4.33	3	7	
City of Hendersonville	4	5	4	4.33	3	7	
City of Millersville	4	5	4	4.33	3	7	
City of Mitchellville	4	5	4	4.33	3	7	
City of Portland	4	5	4	4.33	3	7	
City of Westmoreland	4	5	4	4.33	3	7	
City of White House	4	5	4	4.33	3	7	

Sumner County historically has had a few tornadoes in the past. Based on NOAA NCDC data, the following charts provide a list of tornado events occurring in Sumner County from January 1, 2011 to December 31, 2016] and a description of each tornado's impacts within the county.

### Tornado Events in Sumner County:

**January 1, 2011 – December 31, 2016**

County/Zone	Location	St.	Date	Type	Mag
SUMNER CO.	MILLERSVILLE	TN	1/30/2013	Tornado	EFO
SUMNER CO.	CLEARVIEW	TN	1/30/2013	Tornado	EFO
SUMNER CO.	AVONDALE	TN	1/30/2013	Tornado	EFO
SUMNER CO.	CASTALIAN SPGS	TN	1/30/2013	Tornado	EFO
SUMNER CO.	ROGANA	TN	1/30/2013	Tornado	EFO
SUMNER CO.	PORTLAND	TN	11/17/2013	Tornado	EFO

Source: <http://www.ncdc.noaa.gov/>

### Tornado Impacts in Sumner County:

**January 1, 2011 – December 31, 2016**

Location	Date	Type	Mag	Dth	Inj	Property Damage	Crop Damage
MILLERSVILLE	1/30/2013	Tornado	EFO	0	0	120.00K	30.00K
CLEARVIEW	1/30/2013	Tornado	EFO	0	0	19.00K	15.00K
AVONDALE	1/30/2013	Tornado	EFO	0	0	225.00K	40.00K
CASTALIAN SPGS	1/30/2013	Tornado	EFO	0	0	65.00K	25.00K
ROGANA	1/30/2013	Tornado	EFO	0	0	45.00K	25.00K
PORTLAND	11/17/2013	Tornado	EFO	0	0	200.00K	0.00K

Source: <http://www.ncdc.noaa.gov/>

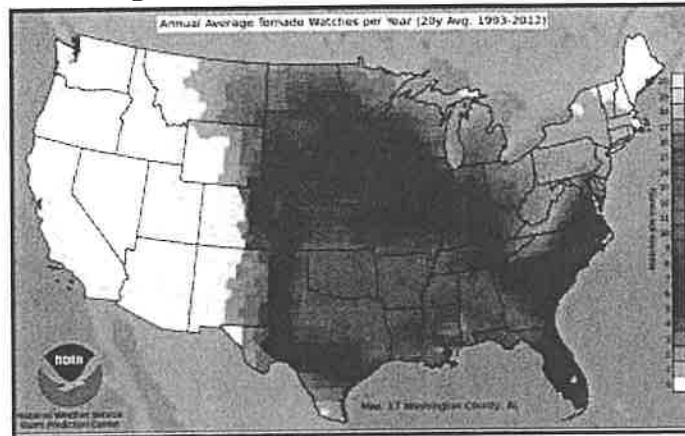
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Based on historical records, tornado events occur twice annually in Sumner County:

<https://www.homefacts.com/tornadoes/Tennessee/Sumner-County.html>

### Average Number of Tornadoes Per Year



Source: <http://www.spc.noaa.gov/wcm/20ytora.png>

The severity of tornadoes that may occur in the county is measured using the 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 exceed an EF4 ranking. Between April 6-8, 2006 there were 73 tornadoes confirmed across 13 states, with the bulk of them coming on the afternoon and evening of April 7 across the South, particularly in Tennessee. In total, 10 deaths were reported as a result of the tornadoes, and over \$650 million in damage was reported, of which over \$630 million was in Middle Tennessee. It was the third major outbreak of 2006, occurring just days after another major outbreak on April 2. It was also considered to be the worst disaster event in Middle Tennessee since the Nashville Tornadoes of 1998 on April 16, 1998.

Additional photos were documented by the Tennessean newspaper at:

<http://www.tennessean.com/picture-gallery/news/local/sumner/2016/04/01/in-photos-april-2006-sumner-tornado/82479300/>





### Fujita Scale/Enhanced Fujita Scale for Tornadoes

Fujita Scale/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 houses; 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

Throughout the county all buildings and infrastructure are vulnerable to tornadoes and severe storm impacts. Sumner County's building stock can be broken down into the following percentage categories: 81% residential, 11.2% commercial, 4.8% industrial, 0.2% agricultural, 0.3% governmental, 1.7% religious, and 0.7% educational (source: Sumner County Hazus Flood Study – table 1 in [Appendix D](#)). 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.

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. Historically, hail events occur about once a year in Sumner County. The severity of hail is measured by the diameter of the hail itself, commonly using the TORRO Hail Index (see following chart). Sumner County's largest hail extent is reported at 1.75 inches (H5). Most of the county's hail events only were reported causing minor roof damage to several homes and vehicles.

### TORRO Hail Index

TORRO Hail Index			
Scale	Max Diameter	Comparisons	Typical Impacts
H0	5-9mm	Pea	No damage.
H1	10-15mm	Mothball	Slight general damage to plants, crops.
H2	16-20mm	Marble	Significant damage to fruit, crops, vegetation.
H3	21-30mm	Walnut	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored.
H4	31-40mm	Pigeon's Egg	Widespread glass damage, vehicle bodywork damage.
H5	41-50mm	Golf Ball	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries.
H6	51-60mm	Hen's Egg	Bodywork of grounded aircraft dented, brick walls pitted.
H7	61-75mm	Tennis Ball	Severe roof damage, risk of serious injuries.
H8	76-90mm	Soft Ball	Severe damage to aircraft bodywork.
H9	91-100mm	Grapefruit	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open.

Source: The Tornado & Storm Research Organization (<http://www.torro.org.uk/hscale.php>)

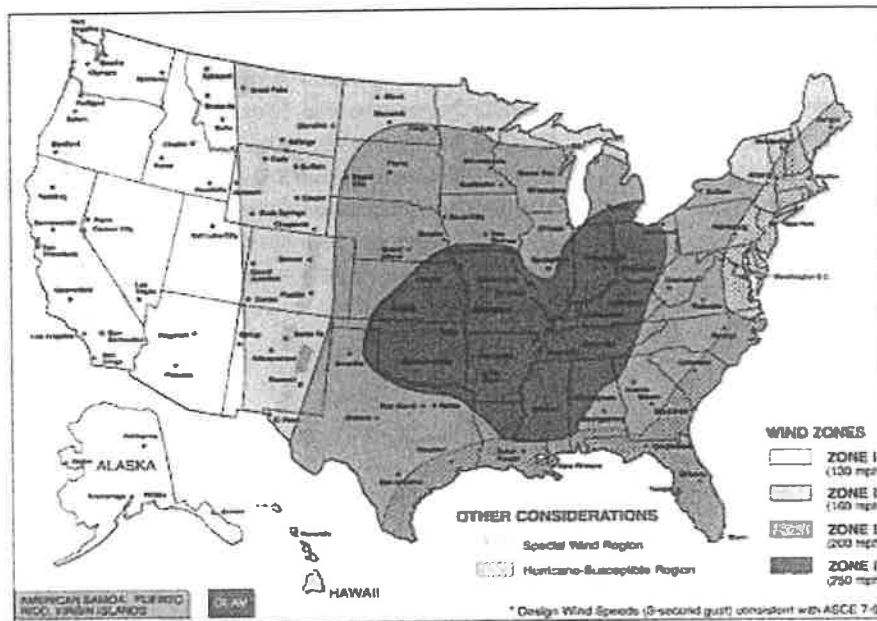
The following chart provides hail event information for Sumner County between January 1, 2011 – December 31, 2016:

### Hail Events in Sumner County: January 1, 2011 – December 31, 2016

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
Totals:								0	0	0.00K	0.00K
WHITE HOUSE	SUMNER CO.	TN	5/10/2016	20:55	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
SOUTH TUNNEL	SUMNER CO.	TN	5/10/2016	21:29	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
GRABALL	SUMNER CO.	TN	5/10/2016	21:30	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
GRABALL	SUMNER CO.	TN	5/10/2016	21:30	CST-6	Hail	1.25 in.	0	0	0.00K	0.00K
HENDERSONVILLE	SUMNER CO.	TN	5/10/2016	22:35	CST-6	Hail	1.75 in.	0	0	0.00K	0.00K
NEW DEAL	SUMNER CO.	TN	7/6/2016	15:00	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
PORTLAND	SUMNER CO.	TN	7/8/2016	19:46	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
GALLATIN	SUMNER CO.	TN	7/19/2016	15:20	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
WHITE HOUSE	SUMNER CO.	TN	3/27/2017	15:02	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
MILLERSVILLE	SUMNER CO.	TN	3/27/2017	15:58	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K

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 about twice a year in Sumner County. The severity of severe storm winds is commonly measured by wind speed (knots or mph). The following chart provides severe storm wind event information for Sumner County between January 1, 2011 – December 31, 2016.

### Wind Zones in the United States



Source: FEMA

### Sumner County Hazard Mitigation Plan

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**Wind Events in Sumner County:****January 1, 2011 – December 31, 2016**Source: <http://www.ncdc.noaa.gov/>

County	Location	St.	Date	Type	Mag	Dth	Inj	Property Damage	Crop Damage
SUMNER CO.	HENDERSONVILLE	TN	2/24/2011	Thunderstorm Wind	74 kts. EG	0	0	75.00K	0.00K
SUMNER CO.	ROCKLAND	TN	2/24/2011	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	ROCKLAND	TN	4/4/2011	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	GALLATIN	TN	4/4/2011	Thunderstorm Wind	55 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	GALLATIN	TN	4/4/2011	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	GALLATIN	TN	4/4/2011	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
SUMNER CO.	BETHPAGE	TN	4/27/2011	Thunderstorm Wind	55 kts. EG	0	0	25.00K	0.00K
SUMNER CO.	AVONDALE	TN	5/21/2011	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	AVONDALE	TN	5/21/2011	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	GALLATIN MUNI ARPT	TN	5/21/2011	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	KANSAS	TN	5/23/2011	Thunderstorm Wind	70 kts. EG	0	0	50.00K	0.00K
SUMNER CO.	GALLATIN	TN	5/24/2011	Thunderstorm Wind	55 kts. EG	0	0	25.00K	0.00K
SUMNER CO.	PLEASANT VLY	TN	5/25/2011	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
SUMNER CO.	PORTLAND	TN	5/25/2011	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	HENDERSONVILLE	TN	5/25/2011	Thunderstorm Wind	52 kts. MG	0	0	0.00K	0.00K
SUMNER CO.	HENDERSONVILLE	TN	5/25/2011	Thunderstorm Wind	58 kts. EG	0	0	25.00K	0.00K
SUMNER CO.	GALLATIN	TN	5/25/2011	Thunderstorm Wind	55 kts. EG	0	0	25.00K	0.00K
SUMNER CO.	ROCKLAND	TN	6/28/2011	Thunderstorm Wind	52 kts. EG	0	0	10.00K	0.00K
SUMNER CO.	JOHNSONS XRDS	TN	6/28/2011	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	WHITE HOUSE	TN	7/7/2011	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
SUMNER CO.	GALLATIN MUNI ARPT	TN	9/3/2011	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
SUMNER CO.	WHITE HOUSE	TN	1/23/2012	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	CUMMINGS XRDS	TN	1/23/2012	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	ROCK BRIDGE	TN	1/23/2012	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
SUMNER CO.	HENDERSONVILLE	TN	1/23/2012	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	AVONDALE	TN	1/23/2012	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	LIBERTY	TN	1/23/2012	Thunderstorm Wind	54 kts. MG	0	0	0.00K	0.00K

County	Location	St.	Date	Type	Mag	Dth	Inj	Property Damage	Crop Damage
SUMNER CO.	GALLATIN	TN	3/17/2012	Thunderstorm Wind	55 kts. MG	0	0	0.00K	0.00K
SUMNER CO.	GALLATIN	TN	5/31/2012	Thunderstorm Wind	55 kts. EG	0	0	30.00K	0.00K
SUMNER CO.	PORTLAND	TN	5/31/2012	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
SUMNER CO.	CUMMINGS XRDS	TN	6/11/2012	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	GALLATIN	TN	7/6/2012	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
SUMNER CO.	GALLATIN	TN	7/6/2012	Thunderstorm Wind	55 kts. EG	0	0	30.00K	0.00K
SUMNER CO.	CEDAR GROVE	TN	7/6/2012	Thunderstorm Wind	55 kts. EG	0	0	25.00K	0.00K
SUMNER CO.	GALLATIN	TN	7/6/2012	Thunderstorm Wind	55 kts. EG	0	0	25.00K	0.00K
SUMNER CO.	PORTLAND	TN	7/19/2012	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
SUMNER CO.	PLEASANT VLY	TN	7/19/2012	Thunderstorm Wind	55 kts. EG	0	0	10.00K	0.00K
SUMNER CO.	ROCKLAND	TN	7/19/2012	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	ROCKLAND	TN	7/19/2012	Thunderstorm Wind	55 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	HENDERSONVILLE	TN	7/19/2012	Thunderstorm Wind	55 kts. EG	0	0	15.00K	0.00K
SUMNER CO.	KANSAS	TN	8/9/2012	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	PORTLAND	TN	8/16/2012	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	COTTONTOWN	TN	1/30/2013	Thunderstorm Wind	52 kts. EG	0	0	10.00K	0.00K
SUMNER CO.	ROCKLAND	TN	1/30/2013	Thunderstorm Wind	56 kts. EG	0	0	20.00K	0.00K
SUMNER CO.	NUBIA	TN	1/30/2013	Thunderstorm Wind	52 kts. EG	0	0	10.00K	0.00K
SUMNER CO.	CEDAR GROVE	TN	5/21/2013	Thunderstorm Wind	60 kts. EG	0	1	250.00K	0.00K
SUMNER CO.	SOUTH TUNNEL	TN	6/9/2013	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	WALNUT GROVE	TN	6/20/2013	Thunderstorm Wind	48 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	SOUTH TUNNEL	TN	6/20/2013	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	WHITE HILL	TN	10/31/2013	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	TYREE SPGS	TN	12/21/2013	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	WHITE HOUSE	TN	12/21/2013	Thunderstorm Wind	48 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	PORTLAND	TN	2/20/2014	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	TWO CHESNUT	TN	4/28/2014	Thunderstorm Wind	70 kts. EG	0	0	10.00K	0.00K
SUMNER CO.	WESTMORELAND	TN	4/28/2014	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	BETHPAGE	TN	7/27/2014	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	WESTMORELAND	TN	7/27/2014	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	PORTLAND	TN	8/7/2014	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	HENDERSONVILLE	TN	8/23/2014	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	LIBERTY	TN	10/7/2014	Thunderstorm Wind	48 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	TYREE SPGS	TN	10/13/2014	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	HENDERSONVILLE	TN	4/3/2015	Thunderstorm Wind	60 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	SAUNDERSVILLE	TN	4/3/2015	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	SOUTH TUNNEL	TN	4/10/2015	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	PROVIDENCE	TN	4/20/2015	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	PORTLAND	TN	5/17/2015	Thunderstorm Wind	65 kts. EG	0	0	20.00K	0.00K
SUMNER CO.	SAUNDERSVILLE	TN	5/17/2015	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	GALLATIN	TN	5/17/2015	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	SAUNDERSVILLE	TN	5/27/2015	Thunderstorm Wind	56 kts. EG	0	0	10.00K	0.00K
SUMNER CO.	PEYTONA	TN	6/26/2015	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	TROUSDALE	TN	7/14/2015	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	WHITE HILL	TN	7/28/2015	Thunderstorm Wind	48 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	ROCKLAND	TN	7/28/2015	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	ROCKLAND	TN	7/28/2015	Thunderstorm Wind	56 kts. EG	0	0	15.00K	0.00K
SUMNER CO.	ROCKLAND	TN	7/28/2015	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	GALLATIN	TN	11/6/2015	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	HENDERSONVILLE	TN	4/6/2016	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	CEDAR GROVE	TN	4/6/2016	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	HENDERSONVILLE	TN	5/10/2016	Thunderstorm Wind	48 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	TROUSDALE	TN	6/13/2016	Thunderstorm Wind	50 kts. EG	0	0	4.00K	0.00K
SUMNER CO.	PORTLAND	TN	6/15/2016	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	SHACKLE IS	TN	6/15/2016	Thunderstorm Wind	52 kts. EG	0	2	1.00K	0.00K

County	Location	St.	Date	Type	Mag	Dth	Inj	Property Damage	Crop Damage
SUMNER CO.	HENDERSONVILLE	TN	6/15/2016	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	GALLATIN	TN	6/15/2016	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	GALLATIN	TN	6/15/2016	Thunderstorm Wind	48 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	CASTALIAN SPGS	TN	6/15/2016	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	KANSAS	TN	6/15/2016	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	PLEASANT VLY	TN	6/16/2016	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	JOHNSONS XRDS	TN	6/16/2016	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	BRANSFORD	TN	7/6/2016	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	PORTLAND	TN	7/6/2016	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	COTTONTOWN	TN	7/6/2016	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	HENDERSONVILLE	TN	7/6/2016	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	HENDERSONVILLE	TN	7/6/2016	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	CASTALIAN SPGS	TN	7/6/2016	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	PORTLAND	TN	7/7/2016	Thunderstorm Wind	48 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	WESTMORELAND	TN	7/7/2016	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	HENDERSONVILLE	TN	7/7/2016	Thunderstorm Wind	48 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	TWO CHESNUT	TN	7/8/2016	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	FOUNTAIN HEAD	TN	7/8/2016	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	HIGHLAND ACADEMY	TN	7/8/2016	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	MILLERSVILLE	TN	7/8/2016	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	CORINTH	TN	7/8/2016	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	SAUNDERSVILLE	TN	7/8/2016	Thunderstorm Wind	52 kts. EG	0	0	6.00K	0.00K
SUMNER CO.	GALLATIN	TN	7/8/2016	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	ROCK BRIDGE	TN	7/8/2016	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	GALLATIN	TN	7/8/2016	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	HENDERSONVILLE	TN	8/5/2016	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
SUMNER CO.	KANSAS	TN	9/10/2016	Thunderstorm Wind	48 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	CEDAR GROVE	TN	11/28/2016	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	HENDERSONVILLE	TN	12/17/2016	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	SUMNER (ZONE)	TN	4/15/2011	Strong Wind	43 kts. EG	0	0	25.00K	0.00K
SUMNER CO.	SUMNER (ZONE)	TN	4/15/2011	Strong Wind	43 kts. EG	0	0	1.00K	0.00K
SUMNER CO.	SUMNER (ZONE)	TN	5/3/2013	Strong Wind	35 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	SUMNER (ZONE)	TN	10/31/2013	Strong Wind	43 kts. EG	0	0	5.00K	0.00K
SUMNER CO.	SUMNER (ZONE)	TN	12/21/2013	Strong Wind	43 kts. EG	0	0	2.00K	0.00K
SUMNER CO.	SUMNER (ZONE)	TN	1/10/2017	Strong Wind	43 kts. EG	0	0	3.00K	0.00K

Sumner County uses a simple system known as a Vulnerability Calculator to determine each jurisdiction's vulnerability to hazard events. The Vulnerability Calculator applies simple arithmetic to analyze probability and potential impacts of events to calculate a risk ranking for each jurisdiction for each hazard.

Source: Calculation of Planning Committee Input using the Vulnerability Calculator.

<b>Human</b>	
<i>Risk of injuries and deaths from the hazard</i>	
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

<b>Property</b>	
<i>Amount of residential property damage associated from the hazard</i>	
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

<b>Business</b>	
<i>Amount of business damage associated from the hazard</i>	
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

<b>Probability</b>	
<i>Likelihood of the hazard occurring within a given span of years</i>	
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

Sumner County's Hazard Mitigation Committee ranked wind events as the second highest risk for all jurisdictions.

Event: Wind Event	Human 1-5	Property 1-5	Business 1-5	Sub-Total	Probability 1-5	Risk Score = [(H+P+B)/3] + P	65.3
Sumner County	3	4	2	3.00	5	8	
City of Gallatin	3	3	3	3.00	5	8	
City of Goodlettsville	4	3	1	2.67	5	8	
City of Hendersonville	3	3	1	2.33	5	7	
City of Millersville	3	2	2	2.33	5	7	
City of Mitchellville	2	2	1	1.67	5	7	
City of Portland	2	3	1	2.00	5	7	
City of Westmoreland	2	3	2	2.33	5	7	
City of White House	2	3	1	2.00	4	6	

# 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 Sumner 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
<b>Overland Flow</b> <b>(a) Infiltration</b> <b>(b) Saturation</b>	-Excess overland flow occurs when the rain is falling more rapidly than it infiltrates into the soil. -Excess overland flow occurs when soil spaces are so full of water that no more rain can be absorbed.
<b>Throughflow</b>	-Rainwater which has infiltrated into unsaturated soil can move horizontally to the river channel. This process is slower than overland flow but faster than baseflow.
<b>Baseflow</b>	-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
<b>Geology</b>	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.
<b>Relief</b>	Water reaches the channel more rapidly in a steeper basin as water is travelling more quickly downhill.
<b>Vegetation</b>	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.
<b>Meteorological Factors</b>	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.
<b>Catchment Shape</b>	It takes less time for water to reach the channel in a circular basin as all extremities are roughly equidistant from the channel.
<b>Land Use</b>	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.
<b>Catchment Size</b>	Water reaches the channel more rapidly in a smaller basin as water has a shorter distance to travel.
<b>Antecedent Conditions</b>	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*

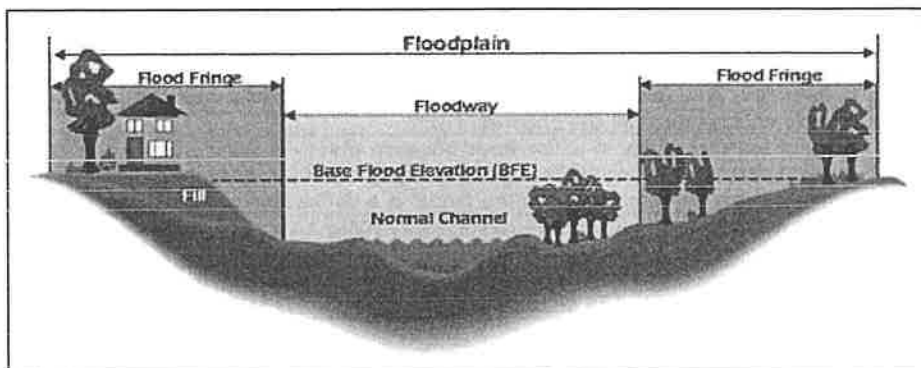
In Sumner County, some areas are more flood-prone than others. One of the easiest ways of identifying these flood-prone areas is through reviewing the county flood maps. These maps display the base floodplain, commonly referred to as to the 100-year

floodplain, which is the national standard used by the National Flood Insurance Program (NFIP) and all Federal agencies for the purposes of requiring the purchase of flood insurance and regulating new development. On NFIP maps, areas within the base floodplain are called the Special Flood Hazard Area (SFHA). The base floodplain or SFHA describes an area with a flood risk that has a 1% chance of being equaled or exceeded in magnitude every year. NFIP flood maps are available for public viewing and use online via the FEMA Map Service Center (<https://msc.fema.gov/portal>).

The term "100-year flood" has caused much confusion for people not familiar with statistics. Commonly, people interpret the 100-year flood definition to mean "once every 100 years." This is wrong. You could experience a 100-year flood two times in the same year, two years in a row, or four times over the course of 100 years. You could also not experience a 100-year flood over the course of 200 or more years. To avoid confusion, the NFIP uses the term "base flood." A 100-year base flood is defined as having a 1% chance of being reached or exceeded in any single year. Thus, the 100-year flood also is called the "1% annual chance flood."

Another way to look at flood risk is to think of the odds that a 100-year flood will happen sometime during the life of a 30-year mortgage—a 26% chance for a structure located in the SFHA. Even these numbers do not convey the true flood risk because they focus on the larger, less frequent, floods. If a house is low enough, it may be subject to the 10- or 25-year flood event. During a 30-year mortgage, it may have a 26% chance of being hit by the 100-year flood, but the odds are 96% (nearly guaranteed) that it will be hit by a 10-year flood. Compare those odds to the only 1-2% chance that the house will catch fire during the same 30-year mortgage.

### Characteristics of a Floodplain



*Source: FEMA*

In Sumner County, all jurisdictions have 100-year floodplains located within their boundaries and all jurisdictions are susceptible to smaller localized flooding outside of the 100-year floodplains.

### **Flood Events in Sumner County:**

**January 1, 2011 – December 31, 2016**

Source: <http://www.ncdc.noaa.gov/>

<b>County/Zone</b>	<b>Location</b>	<b>St.</b>	<b>Date</b>	<b>Type</b>
SUMNER CO.	MILLERSVILLE	TN	4/27/2013	Flash Flood
SUMNER CO.	OLD HICKORY	TN	8/8/2013	Flash Flood
SUMNER CO.	BRANSFORD	TN	8/12/2013	Flash Flood
SUMNER CO.	MITCHELLVILLE	TN	5/11/2016	Flash Flood
SUMNER CO.	MITCHELLVILLE	TN	5/26/2016	Flash Flood
SUMNER CO.	MITCHELLVILLE	TN	7/7/2016	Flash Flood
SUMNER CO.	PLEASANT GROVE	TN	7/29/2016	Flash Flood
SUMNER CO.	ROGANA	TN	8/5/2012	Flood
SUMNER CO.	CLEARVIEW	TN	8/20/2014	Flood
SUMNER CO.	TROUSDALE	TN	6/13/2016	Flood
SUMNER CO.	ROCK BRIDGE	TN	5/11/2016	Heavy Rain
SUMNER CO.	ROCK BRIDGE	TN	5/11/2016	Heavy Rain
SUMNER CO.	CASTALIAN SPGS	TN	7/6/2016	Heavy Rain
SUMNER CO.	SAUNDERSVILLE	TN	7/6/2016	Heavy Rain
SUMNER CO.	ROCK BRIDGE	TN	7/6/2016	Heavy Rain
SUMNER CO.	CASTALIAN SPGS	TN	7/7/2016	Heavy Rain

Flooding is particularly prone in the areas in any low-lying area near running creeks, and in the eastern portions of Hendersonville, Bledsoe Creek including Castalian Springs and Bledsoe Creek State Park, Station Camp Creek, East Camp Creek, Liberty Branch, and Town Creek including Gallatin. Old Gallatin Road, Keytown Road, Hogan's Branch Road - located off Long Hollow Pike. In the Cottontown area, Shun Pike Road and Pee Dee Road. In May 2017 two people had to be rescued from a trailer on Cummins Lane and Upper Station Road.

## Flood Impacts in Sumner County:

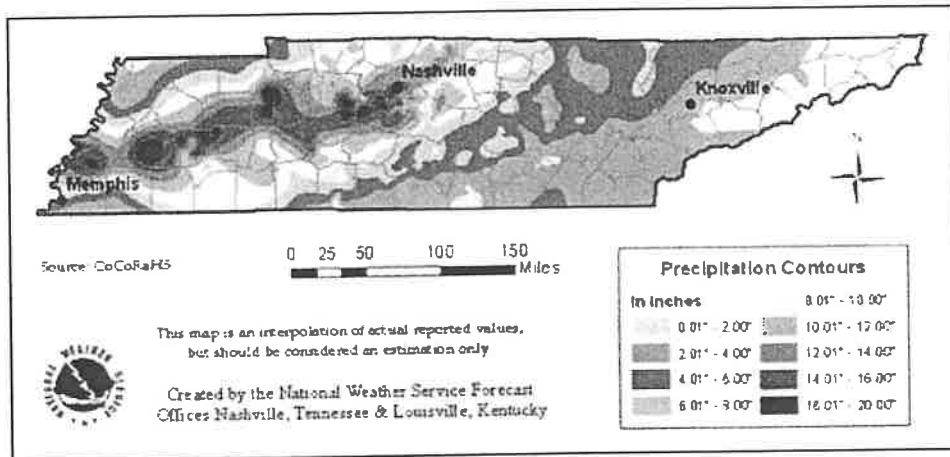
**January 1, 2011 – December 31, 2016**

Location	Date	Time	Type	Deaths	Injuries	Property Damage	Crop Damage
MILLERSVILLE	4/27/2013	22:00	Flash Flood	0	0	25.00K	0.00K
OLD HICKORY	8/8/2013	7:00	Flash Flood	0	0	500.00K	0.00K
BRANSFORD	8/12/2013	9:15	Flash Flood	0	0	0.00K	0.00K
MITCHELLVILLE	5/11/2016	2:00	Flash Flood	0	1	3.000M	0.00K
MITCHELLVILLE	5/26/2016	16:00	Flash Flood	0	0	5.00K	0.00K
MITCHELLVILLE	7/7/2016	2:00	Flash Flood	0	0	5.000M	0.00K
PLEASANT GROVE	7/29/2016	11:15	Flash Flood	0	0	100.00K	0.00K
ROGANA	8/5/2012	10:30	Flood	0	0	0.00K	0.00K
CLEARVIEW	8/20/2014	16:00	Flood	0	0	0.00K	0.00K
TROUSDALE	6/13/2016	14:30	Flood	0	0	0.00K	0.00K
ROCK BRIDGE	5/11/2016	18:00	Heavy Rain	0	0	0.00K	0.00K
ROCK BRIDGE	5/11/2016	18:00	Heavy Rain	0	0	0.00K	0.00K
CASTALIAN SPGS	7/6/2016	5:00	Heavy Rain	0	0	0.00K	0.00K
SAUNDERSVILLE	7/6/2016	6:00	Heavy Rain	0	0	0.00K	0.00K
ROCK BRIDGE	7/6/2016	6:00	Heavy Rain	0	0	0.00K	0.00K
CASTALIAN SPGS	7/7/2016	0:00	Heavy Rain	0	0	0.00K	0.00K

Source: <http://www.ncdc.noaa.gov/>

As seen with the May 2010 Tennessee Flood Event (*DR-1909*), it is possible for 20 inches or more of rainfall to amass within two days (see following map).

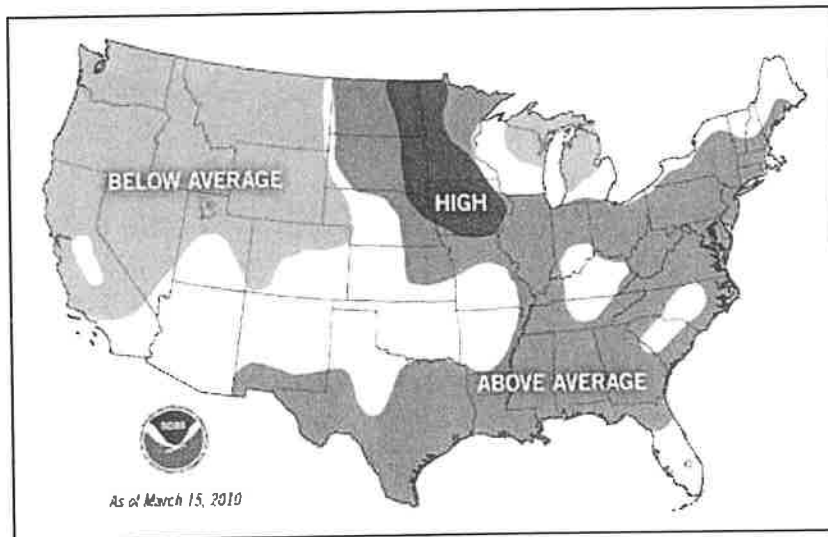
## Tennessee May Flood- Precipitation for May 1<sup>st</sup> & 2<sup>nd</sup> 2010



Source: National Weather Service <http://www.srh.noaa.gov/ohx/?n=may2010epicfloodevent>

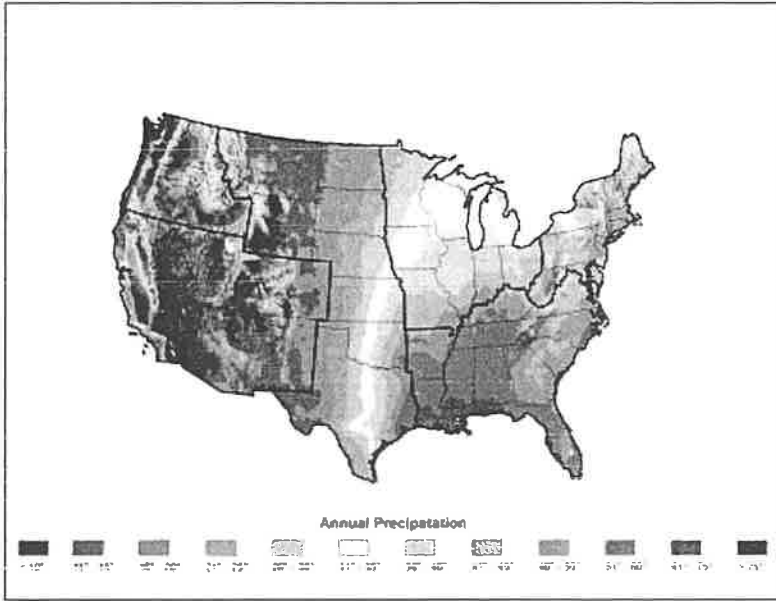
According to a NOAA Flood Risk Map (see map below), the majority of Tennessee was located in an "above average" risk of flooding zone during spring 2010. This proposed vulnerability is coupled with the fact that on average Tennessee usually receives over 50-60 inches of rainfall a year (see following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

### Flood Risk Map



Source: NOAA <https://www.climate.gov/news-features/featured-images/above-average-flood-risk-forecast-one-third-us>

### Average Annual Precipitation (1981-2010)



Source: [http://scenarios.globalchange.gov/sites/default/files/b/figures/UnitedStates/US\\_Annual\\_Precipitation.jpg](http://scenarios.globalchange.gov/sites/default/files/b/figures/UnitedStates/US_Annual_Precipitation.jpg)

The May 2010 floods were the worst flood event in State history. However, Sumner County does remain at flood risk by the geographic location of creeks, streams, rivers and lakes shown in the map below:

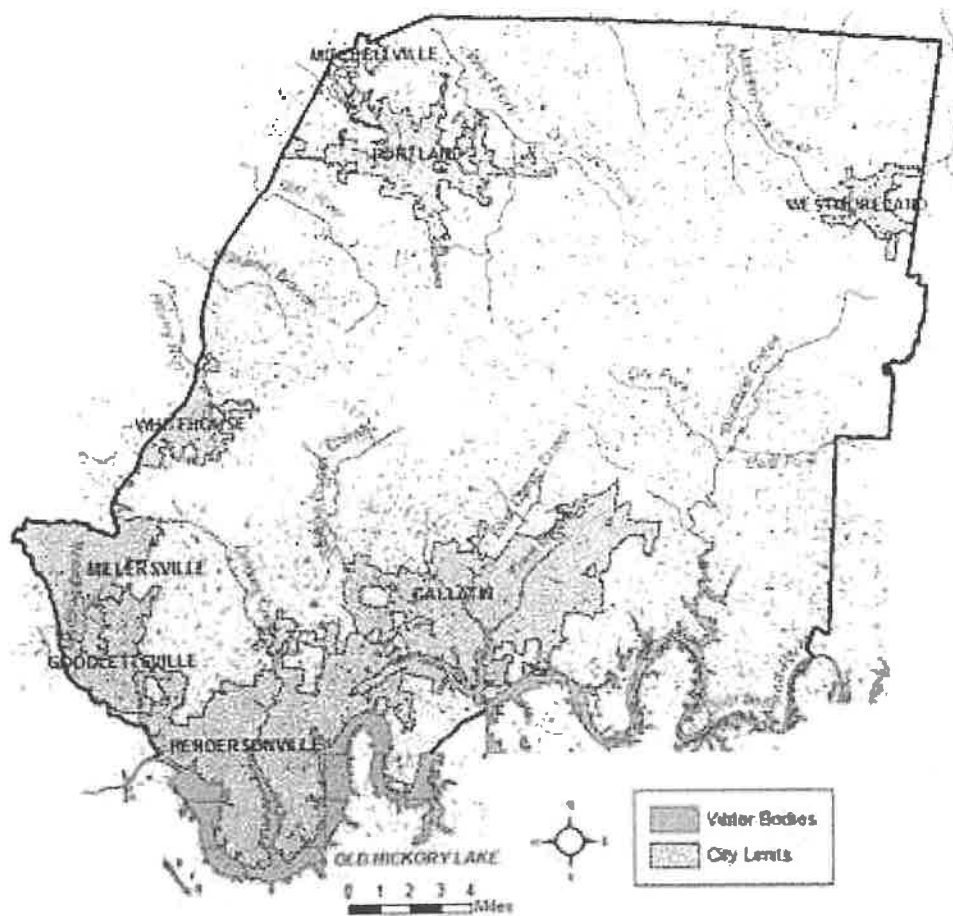


Figure 6-21: Major Creeks, Streams, Rivers, and Lakes in Sumner County

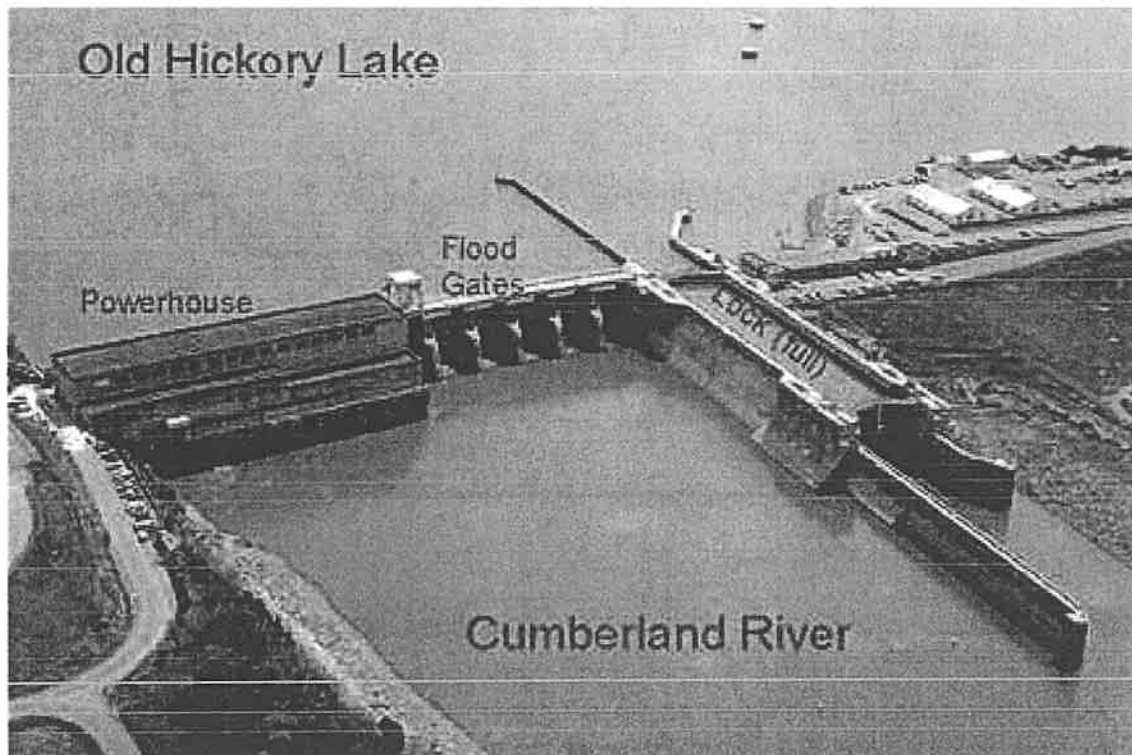
Source: [http://www.sumnertn.org/documents/planning\\_zoning/long\\_range\\_planning\\_documents/h - 6natural-cultural\\_resources\\_final.pdf](http://www.sumnertn.org/documents/planning_zoning/long_range_planning_documents/h - 6natural-cultural_resources_final.pdf)

Sumner County uses a simple system known as a Vulnerability Calculator to determine each jurisdiction's vulnerability to hazard events. The Vulnerability Calculator applies simple arithmetic to analyze probability and potential impacts of events to calculate a risk ranking for each jurisdiction for each hazard.

## Dam Failure

Sumner County shares the Old Hickory Lock and Dam, located on the Cumberland River at river mile 216.2 with Davidson County, approximately 25 miles (40 km) upstream from Nashville, Tennessee. Old Hickory Dam was a key element in flood control during flooding on the Cumberland River in 2010. The operation and timing of water releases, following the 13.5 inches (340 mm) of rain over two days, subsequently became the subject of a US Senate hearing.

The reservoir behind the dam is Old Hickory Lake. The dam and lake are named after President Andrew Jackson (nicknamed "Old Hickory"), who lived in the vicinity at The Hermitage. Old Hickory Lock and Dam was authorized for construction by the Rivers and Harbors Act of 1946 as a unit of a comprehensive development plan for the Cumberland River Basin. The project was designed by the U.S. Army Corps of Engineers and built by private contractors under the Corp's supervision and completed in June 1954.

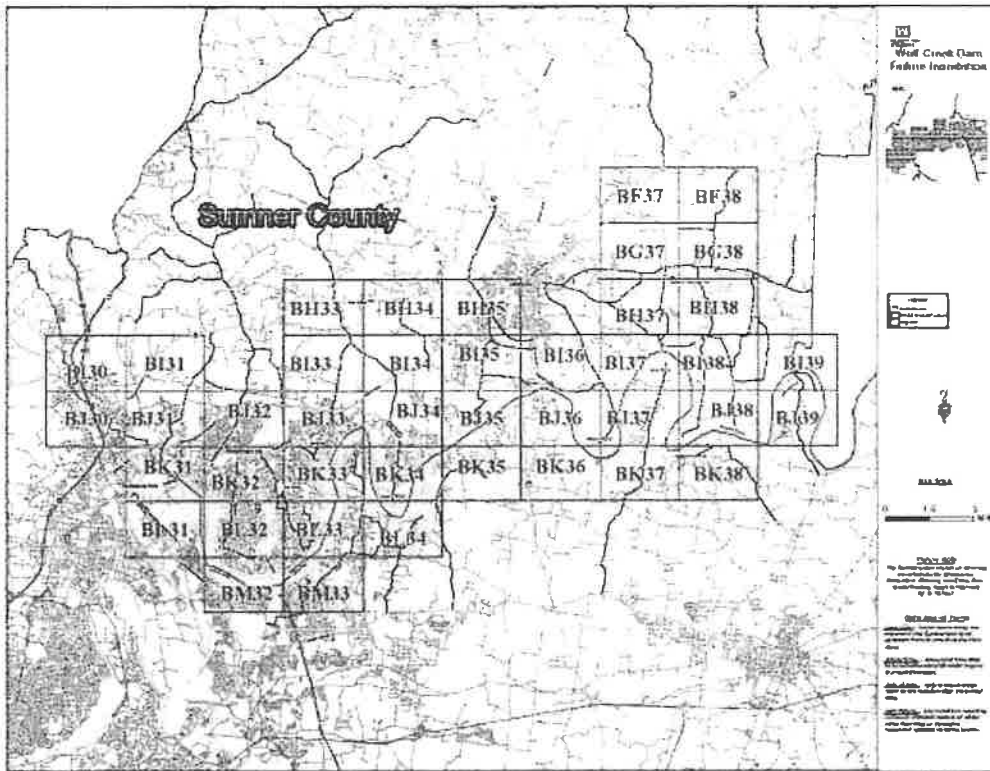


The lock, dam, powerhouse and lake are operated and supervised by the U.S. Army Corps of Engineers' personnel under the direction of the District Engineer at Nashville. The lock allows barges and recreational boats to navigate the Cumberland River.

Sumner County is also located downstream from the Wolf Creek Dam. Construction of the Wolf Creek Dam was authorized by the Flood Control Act of 1938 and the River Harbor Act of 1946 as part of a comprehensive plan to develop the Cumberland River

Basin. Construction began in 1941 but because of World War II and other factors, construction was not completed until 1951. In 1968, signs of seepage problems within Wolf Creek Dam's earthen embankments and foundation were discovered. Sinkholes appeared at the downstream toe of the dam, and muddy water was observed in the dam's outflow channel. The seepage problems were traced to the karst geology of the region which allows for the dissolution of limestone in the dam's foundation. The dam and its adjacent reservoir reside upon a heavy Karst bedrock foundation. In late January 2007, the U.S. Army Corps of Engineers placed the dam under a 'high risk' for failure designation. The map below predicts ranges of inundation, based on variations in how badly the dam would fail and drain the reservoir and how quickly water levels would rise downstream.

A new long-term solution was proposed to solve, or control, the current seepage problem. A grout curtain and a new concrete diaphragm wall of greater dimensions will be constructed with newer technologies. To reduce the current stresses on Wolf Creek Dam, and thus the risk, the Corps believes it should lower Lake Cumberland to 640 ft (200 m), 83 ft (25 m) lower than normal summer levels.<sup>[9]</sup> However, this will affect up to 200,000 area citizens' water supply and has also met resistance from marina owners, so the water level has remained at 40 ft (12 m) below normal. This 40 ft. lowered lake level is to be held for an indefinite amount of time and will be subject to frequent review. In October 2007, warning sirens were installed in counties downstream from the dam. Following the May 2010 flooding, the Army Corps of Engineers began a nearly \$600 million rehabilitation effort on Kentucky's Wolf Creek Dam, a nearly mile-long structure located on the Cumberland River upstream from Nashville, designed to mitigate cascading flood events.



The Sumner County Emergency Management Agency maintains its Wolf Creek Dam Plan on a public-facing website available to citizens and neighboring communities at: <http://sumnerema.org/disaster-preparedness/wolf-creek-dam-plan/>

Representatives from the Corps of Engineers actively participated in the development of this Hazard Mitigation plan. The Sumner County Emergency Management Director works closely with the Corps of Engineers to ensure situational awareness and timely notification. Dam failures are an infrequent occurrence. There has never been a major dam failure in Tennessee. All of the failures that have occurred in the state have involved the small agricultural dams. There have been no previous occurrences of dam failure in Sumner County. This makes predicting future probability difficult. In Tennessee, there are more than 1,200 dams and significant dam failures occur on an average of less than once every 40 years.

Source: Calculation of Planning Committee Input using the Vulnerability Calculator

<b>Human</b>	
<i>Risk of injuries and deaths from the hazard</i>	
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

<b>Property</b>	
<i>Amount of residential property damage associated from the hazard</i>	
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

<b>Business</b>	
<i>Amount of business damage associated from the hazard</i>	
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

<b>Probability</b>	
<i>Likelihood of the hazard occurring within a given span of years</i>	
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

Sumner County's Hazard Mitigation Committee ranked flood events as the third highest risk for all jurisdictions.

Event: Flood	Human 1-5	Property 1-5	Business 1-5	Sub-Total	Probability 1-5	Risk Score = [(H+P+B)/3] + P	54.7
Sumner County	4	5	4	4.33	5	9	
City of Gallatin	4	4	4	4.00	4	8	
City of Portland	2	4	2	2.67	4	7	
City of Millersville	1	3	1	1.67	4	6	
City of Mitchellville	1	3	1	1.67	4	6	
City of Godlettsville	2	4	2	2.67	2	5	
City of Hendersonville	2	3	2	2.33	3	5	
City of White House	2	3	1	2.00	3	5	
City of Westmoreland	2	3	2	2.33	2	4	

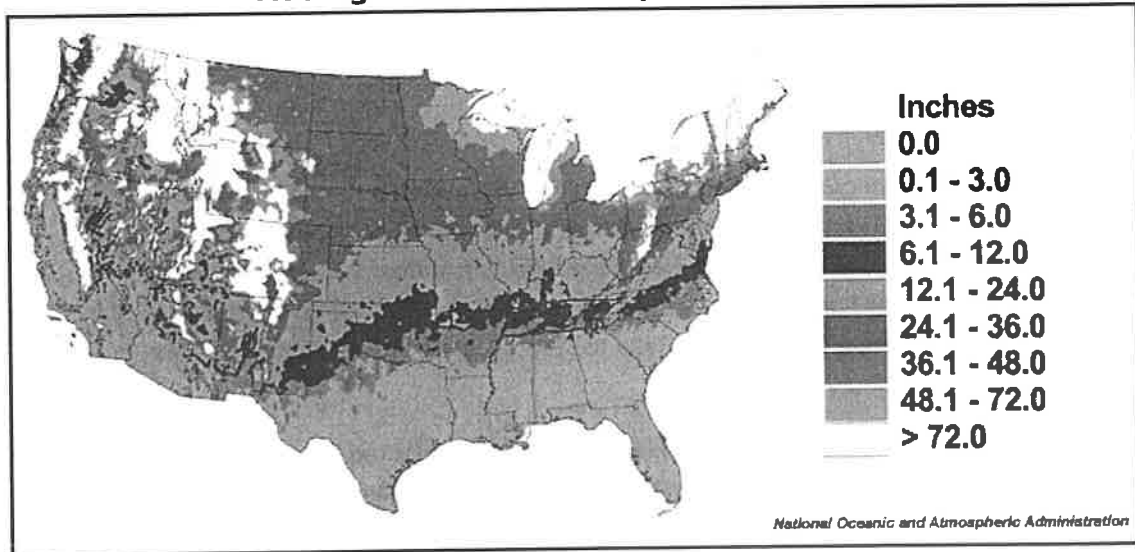
Throughout the county all buildings and infrastructure are vulnerable to tornadoes and severe storm impacts. Sumner County's building stock can be broken down into the following percentage categories: 81% residential, 11.2% commercial, 4.8% industrial, 0.2% agricultural, 0.3% governmental, 1.7% religious, and 0.7% educational (source: Sumner County Hazus Flood Study – table 1 in [Appendix D](#)). 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. For further information about flooding hazards in Sumner County, see the HAZUS flood study in [Appendix D](#).

## 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 Sumner County, all jurisdictions are vulnerable to freezes and moderate winter storms, but not to the severity level seen in much of the northern U.S.

Based on previous occurrences, Sumner County usually experiences one major winter storm event every 2-3 years. The severity of winter storms is commonly measured by inches of snowfall.

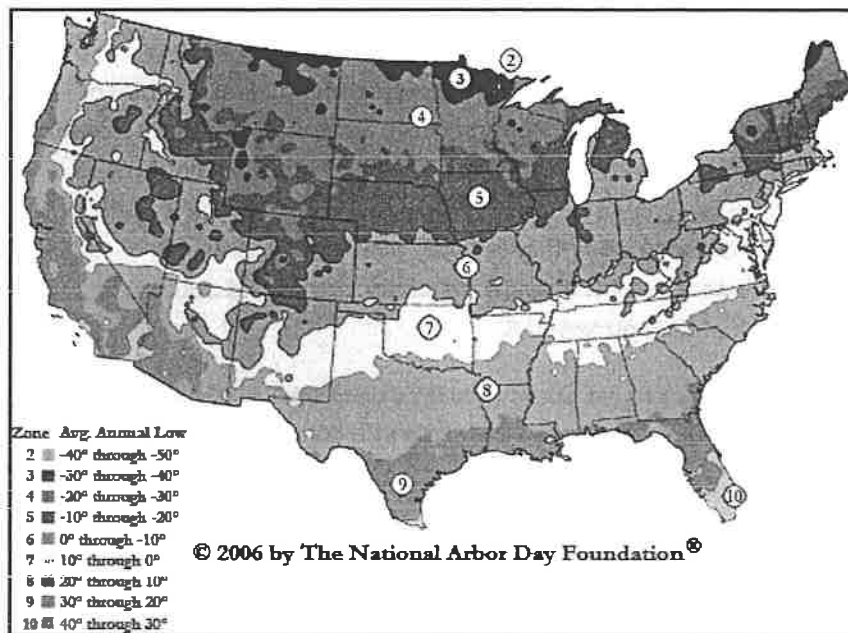
**Average Mean Snowfall per Year**



Source: NOAA

Sumner 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*

It is possible for Sumner County to experience up to 1inch of ice accumulation, as experienced in the 2015 ice storm. A few roads in the county were closed due to traffic accidents. In Hendersonville, a tractor trailer truck hauling lumber veered into Drakes Creek on Drakes Creek Road and Jones Lane. A multi-vehicle accident closed New Shackle Island Road from Drakes Creek Road to Stop 30 Road. There were no injuries involved in that crash.

Two homes on Circle Drive sustained damage when a tree weighted by snow fell on them Friday afternoon. At least one family was displaced. Highway 25 between Cottontown and Johnson's Crossroads was closed after a semi slid off the road. New Hope Road was closed near Daniel Drive due to a crash, Chief Deputy Aaron Pickard with the Sumner County Sheriff's Office said Friday morning. About 18 wrecks were reported in the county between 5 and 11 a.m., a relatively low number, Pickard said.

Throughout the county all buildings and infrastructure are vulnerable to severe storm impacts. Sumner County's building stock can be broken down into the following percentage categories: 81% residential, 11.2% commercial, 4.8% industrial, 0.2% agricultural, 0.3% governmental, 1.7% religious, and 0.7% educational (source: Sumner County Hazus Flood Study – table 1 in [Appendix D](#)). 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.

The following chart provides winter storm event information for Sumner County between January 1, 2011 – December 31, 2016.

**Winter Events in Sumner County:  
January 1, 2011 – December 31, 2016**

Location	Date	Time	Type	Deaths	Injuries	Property Damage
SUMNER (ZONE)	1/15/2013	17:00	Ice Storm	0	0	0.00K
SUMNER (ZONE)	2/16/2015	0:00	Winter Storm	0	0	100.00K
SUMNER (ZONE)	2/20/2015	12:00	Winter Storm	0	0	500.00K
SUMNER (ZONE)	3/4/2015	15:00	Winter Storm	0	0	0.00K
SUMNER (ZONE)	1/21/2016	21:00	Winter Storm	0	0	10.00K
SUMNER (ZONE)	1/7/2011	23:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	1/10/2011	1:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	1/11/2011	8:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	1/20/2011	16:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	2/7/2011	10:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	2/9/2011	15:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	1/12/2012	16:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	2/10/2012	18:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	2/19/2012	8:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	1/15/2013	18:00	Winter Weather	0	0	7.00K
SUMNER (ZONE)	1/25/2013	2:00	Winter Weather	0	0	50.00K
SUMNER (ZONE)	1/25/2013	2:00	Winter Weather	0	0	5.00K
SUMNER (ZONE)	1/25/2013	2:00	Winter Weather	0	0	10.00K
SUMNER (ZONE)	1/31/2013	22:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	3/1/2013	18:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	3/1/2013	18:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	12/7/2013	21:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	12/9/2013	21:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	1/2/2014	16:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	1/5/2014	20:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	1/21/2014	12:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	1/25/2014	3:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	2/2/2014	22:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	2/7/2014	21:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	3/2/2014	19:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	11/17/2014	5:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	1/23/2015	18:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	1/26/2015	17:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	2/18/2015	1:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	2/25/2015	12:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	1/20/2016	0:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	2/8/2016	12:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	2/12/2016	0:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	2/14/2016	7:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	12/18/2016	2:00	Winter Weather	0	0	0.00K
SUMNER (ZONE)	1/6/2017	6:00	Winter Weather	0	0	0.00K

Sumner County uses a simple system known as a Vulnerability Calculator to determine each jurisdiction's vulnerability to hazard events. The Vulnerability Calculator applies simple arithmetic to analyze probability and potential impacts of events to calculate a risk ranking for each jurisdiction for each hazard.

**Source:** Calculation of Planning Committee Input using the Vulnerability Calculator

<b>Human</b>	
<i>Risk of injuries and deaths from the hazard</i>	
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

<b>Property</b>	
<i>Amount of residential property damage associated from the hazard</i>	
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

<b>Business</b>	
<i>Amount of business damage associated from the hazard</i>	
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

<b>Probability</b>	
<i>Likelihood of the hazard occurring within a given span of years</i>	
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

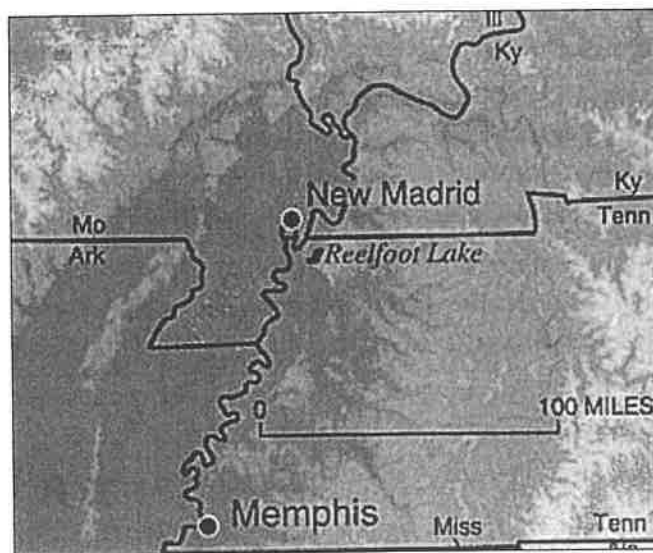
Sumner County's Hazard Mitigation Committee ranked winter weather as the fourth highest risk for all jurisdictions:

Event: Winter Weather	Human 1-5	Property 1-5	Business 1-5	Sub-Total	Probability 1-5	Risk Score = [(H+P+B)/3] + P	52.0
Sumner County	4	4	4	4.00	5	9	
City of Gallatin	1	1	1	1.00	5	6	
City of Goodlettsville	1	1	1	1.00	5	6	
City of Hendersonville	1	1	1	1.00	5	6	
City of Millersville	0	0	0	0.00	5	5	
City of Mitchellville	0	0	0	0.00	5	5	
City of Portland	0	0	0	0.00	5	5	
City of Westmoreland	0	0	0	0.00	5	5	
City of White House	0	0	0	0.00	5	5	

## Earthquakes

Sumner 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 Sumner 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.

Source: <http://earthquake.usgs.gov/learn/topics/mercalli.php>

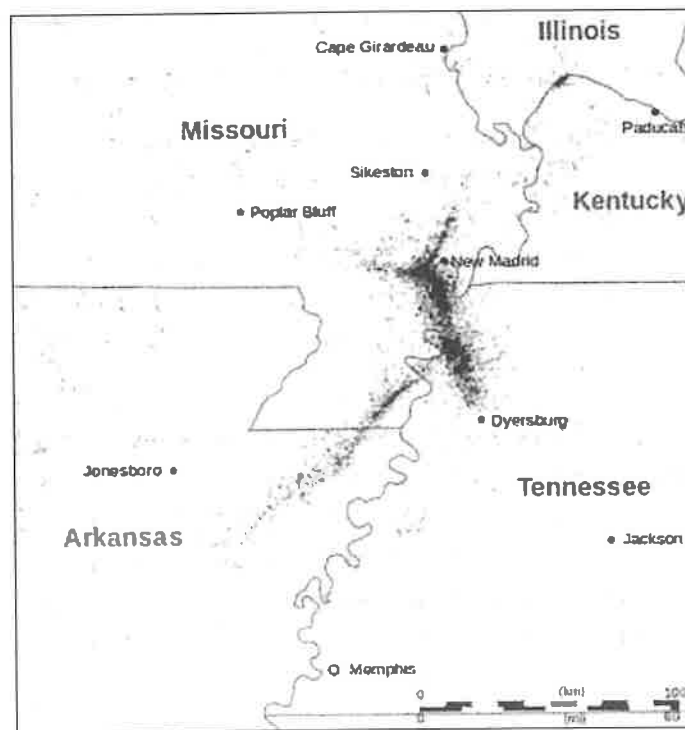
<b>The Modified Mercalli Intensity Scale</b>		
<b>Intensity</b>	<b>Shaking</b>	<b>Description/Damage</b>
<b>I</b>	<b><i>Not felt</i></b>	Not felt except by a very few under especially favorable conditions.
<b>II</b>	<b><i>Weak</i></b>	Felt only by a few persons at rest, especially on upper floors of buildings.
<b>III</b>	<b><i>Weak</i></b>	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.
<b>IV</b>	<b><i>Light</i></b>	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.
<b>V</b>	<b><i>Moderate</i></b>	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
<b>VI</b>	<b><i>Strong</i></b>	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
<b>VII</b>	<b><i>Very strong</i></b>	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.
<b>VIII</b>	<b><i>Severe</i></b>	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.
<b>IX</b>	<b><i>Violent</i></b>	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.
	<b><i>Extreme</i></b>	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

Source: [http://earthquake.usgs.gov/learn/topics/mag\\_vs\\_int.php](http://earthquake.usgs.gov/learn/topics/mag_vs_int.php)

<b>Magnitude / Intensity Comparison</b>	
<b>Magnitude (Richter)</b>	<b>Typical Maximum Modified Mercalli Intensity</b>
<b>1.0 - 3.0</b>	<b>I</b>
<b>3.0 - 3.9</b>	<b>II - III</b>
<b>4.0 - 4.9</b>	<b>IV - V</b>
<b>5.0 - 5.9</b>	<b>VI - VII</b>
<b>6.0 - 6.9</b>	<b>VII - IX</b>
<b>7.0 and higher</b>	<b>VIII or higher</b>

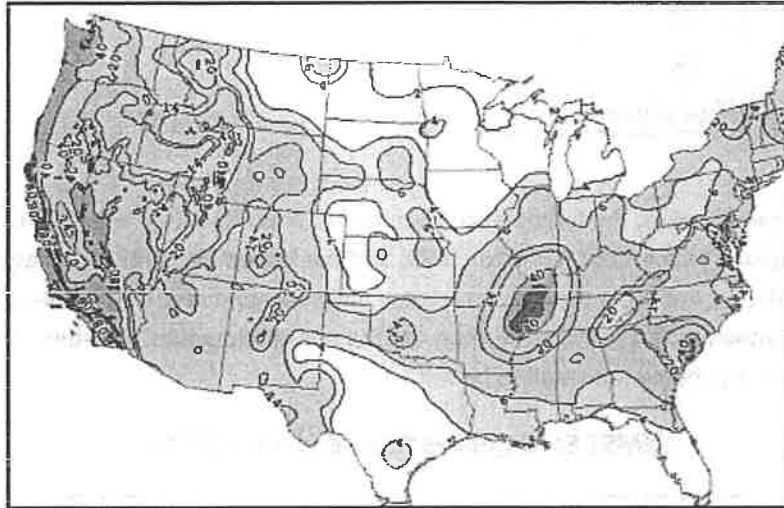
Since the 1812 earthquakes, the largest recorded quakes from this zone were the October 1895, 6.6 magnitude quake (epicenter Charleston, MO) and the November 1968, 5.5 magnitude quake (epicenter in Dale, IL). From the time when seismic measurement instruments were installed in and around the zone in 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**



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 Sumner County). Based on this report, a 7.7 magnitude quake in the NMSZ would result in thousands of fatalities, tens of thousands of damages to structures, and total disruption of vital infrastructure in Western Tennessee.

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



Source: <http://earthquake.usgs.gov/hazards/products/>

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.

Throughout the county all buildings and infrastructure are vulnerable to tornadoes and severe storm impacts. Sumner County’s building stock can be broken down into the following percentage categories: 81% residential, 11.2% commercial, 4.8% industrial, 0.2% agricultural, 0.3% governmental, 1.7% religious, and 0.7% educational (source: Sumner County Hazus Flood Study – table 1 in [Appendix D](#)). 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

Sumner County uses a simple system known as a Vulnerability Calculator to determine each jurisdiction's vulnerability to hazard events. The Vulnerability Calculator applies simple arithmetic to analyze probability and potential impacts of events to calculate a risk ranking for each jurisdiction for each hazard.

**Source:** Calculation of Planning Committee Input using the Vulnerability Calculator

<b>Human</b>	
<i>Risk of injuries and deaths from the hazard</i>	
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

<b>Property</b>	
<i>Amount of residential property damage associated from the hazard</i>	
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

<b>Business</b>	
<i>Amount of business damage associated from the hazard</i>	
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

<b>Probability</b>	
<i>Likelihood of the hazard occurring within a given span of years</i>	
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

Sumner County would likely be affected only indirectly by an earthquake event, so the Hazard Mitigation Committee ranked earthquake as the fifth highest risk for all jurisdictions:

<b>Event: Earthquake</b>	<b>Human 1-5</b>	<b>Property 1-5</b>	<b>Business 1-5</b>	<b>Sub-Total</b>	<b>Probability 1-5</b>	<b>Risk Score = [(H+P+B)/3] + P</b>	<b>19.3</b>
Sumner County	2	1	1	1.33	1	2	
City of Gallatin	2	1	1	1.33	1	2	
City of Goddettsville	2	1	1	1.33	1	2	
City of Hendersonville	2	1	1	1.33	1	2	
City of Millersville	1	1	1	1.00	1	2	
City of Mitchellville	1	1	1	1.00	1	2	
City of Portland	1	1	1	1.00	1	2	
City of Westmoreland	1	1	1	1.00	1	2	
City of White House	1	1	1	1.00	1	2	

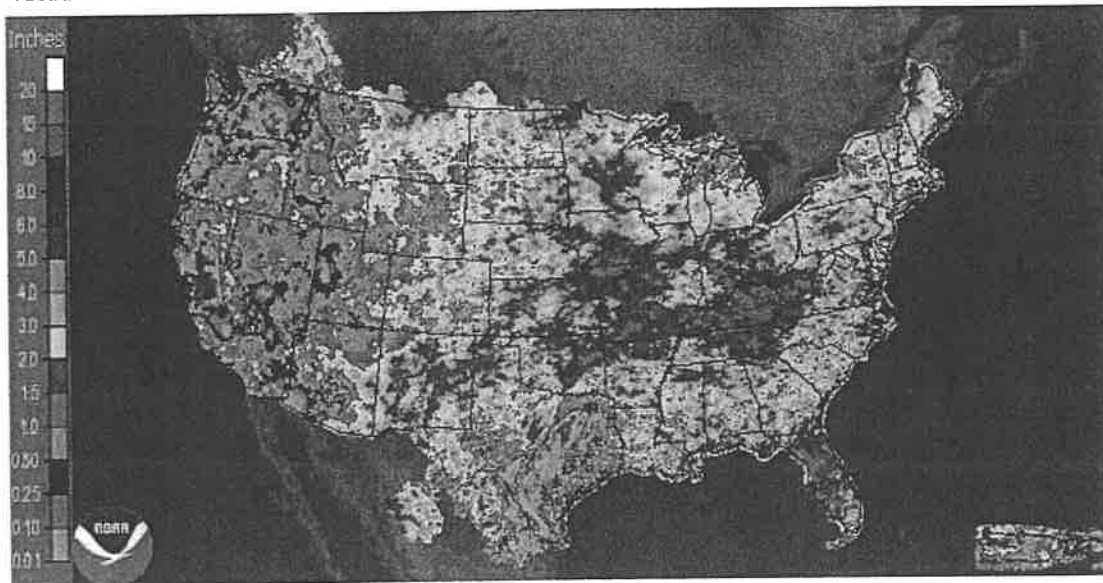
## Drought/Wildfire

Drought is being added to this plan revision to document changes in conditions statewide that could potentially result in hazards requiring mitigation. Extended periods of drought contributed to wildfires in East Tennessee on November 28, 2016, resulting in 14 fatalities and damage to more than 2,400 structures in Sevier County.

A drought is a period of unusually constant dry weather that persists long enough to cause deficiencies in water supply (surface or underground). Droughts are slow-onset hazards, but, over time, they can severely affect crops, municipal water supplies, recreational resources, and wildlife.

If drought conditions extend over a number of years, the direct and indirect economic impacts can be significant. High temperatures, high winds, and low humidity can worsen drought conditions and also make areas more susceptible to wildfire. In addition, human actions and demands for water resources can accelerate drought-related impacts.

CONUS + Puerto Rico: Current Month to Date Observed Precipitation  
Valid at 7/31/2015 1200 UTC- Created 7/31/15 18:27 UTC



*Source: NOAA*

There has been only one major incidence of severe drought, which affected the entire state in 2007. It began in March 2007, but was exacerbated by a hard freeze in early April which killed or damaged many outdoor plants. Effects of the drought began being felt in May by agriculture interests. The quality of hay was poorer, and yield was down by as much as 60 to 70 percent. There were 14 consecutive days in May, specifically from May 17-30, when no rain fell in Nashville. There was a trace of rain on May 31. May had 3.30 inches of rain which was 1.77

inches below normal. The Tennessee State Department of Agriculture estimated the crop loss in the 100's of millions of dollars.

The drought was in full swing by Mid-May, and by the end of June, many locations were running at least 10 inches below normal rainfall. Since the drought continued into the Fall of 2007, agriculture suffered greatly - in particular farmers and nursery owners, which were the hardest hit economically. Corn, soy, and tobacco yields were very low and of poor quality. Many farmers bought hay from other farmers at 3 times the normal price. Corn production was down 50 percent in Sumner County. F

The Committee did discuss drought and wildfire, and although historical data on drought in Sumner County is limited and there is no data on wildfire, drought is being added to this plan revision since the rural nature of the county creates an economic dependence related to this hazard. Future probability is anticipated to be low risk and no projects are currently identified.

#### **Drought Events in Sumner County: January 1, 1994 – December 31, 2017**

<b>Location</b>	<b>Date</b>	<b>Time</b>	<b>T.Z.</b>	<b>Type</b>	<b>Mag</b>	<b>Deaths</b>	<b>Injuries</b>	<b>Property Damage</b>	<b>Crop Damage</b>
SUMNER (ZONE)	5/1/2007	0:00	CST-6	Drought		0	0	0.00K	0.00K
SUMNER (ZONE)	6/1/2007	0:00	CST-6	Drought		0	0	0.00K	0.00K
SUMNER (ZONE)	7/1/2007	0:00	CST-6	Drought		0	0	0.00K	0.00K
SUMNER (ZONE)	8/1/2007	0:00	CST-6	Drought		0	0	0.00K	0.00K
SUMNER (ZONE)	9/1/2007	0:00	CST-6	Drought		0	0	0.00K	0.00K
SUMNER (ZONE)	10/1/2007	0:00	CST-6	Drought		0	0	0.00K	0.00K
SUMNER (ZONE)	11/1/2007	0:00	CST-6	Drought		0	0	0.00K	0.00K
SUMNER (ZONE)	11/1/2008	0:00	CST-6	Drought		0	0	0.00K	0.00K
SUMNER (ZONE)	12/1/2008	0:00	CST-6	Drought		0	0	0.00K	0.00K
SUMNER (ZONE)	7/3/2012	0:00	CST-6	Drought		0	0	0.00K	0.00K
SUMNER (ZONE)	11/1/2016	0:00	CST-6	Drought		0	0	0.00K	0.00K
SUMNER (ZONE)	12/1/2016	0:00	CST-6	Drought		0	0	0.00K	0.00K

### **Sumner County Presidential Declared Disaster Chart:**

<b>2000</b>	DR-1331; Public Assistance	<b>2007</b>	
<b>2001</b>		<b>2008</b>	
<b>2002</b>		<b>2009</b>	DR-1821; Public Assistance
<b>2003</b>	DR-1464; Individual & PA	<b>2010</b>	DR-1909; Individual & PA
<b>2004</b>		<b>2011</b>	DR-1974 & DR-1979; PA
<b>2005</b>		<b>2011</b>	
<b>2006</b>		<b>2012</b>	
<b>2007</b>		<b>2013</b>	
<b>2008</b>		<b>2014</b>	DR-4171; Public Assistance
<b>2015</b>		<b>2016</b>	DR-4293; Individual & PA

## Section 4: Mitigation Strategy

### Mitigation Goals

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 Sumner County Hazard Mitigation Committee identified the following goals to be the forefront in the overall development of this plan. 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.

**Goal 1:** Protect the lives and health of citizens from the effects of natural hazards.

**Goal 2:** Emphasize mitigation planning to decrease vulnerability of existing and new structures.

**Goal 3:** Encourage public support and commitment to hazard mitigation by communicating risks and mitigation benefits.

### Identification and Prioritization of Mitigation Projects

Sumner County has developed a comprehensive range of mitigation projects. These projects were solicited and identified by the different entities that make up the Sumner 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, Sumner County was able to determine when and which projects should be implemented based on available funding and time.

The Sumner 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.

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 Sumner County Hazard Mitigation Project List.

Project Prioritization Method: SAFE-T			
Variable		Rank	Description
<b>S</b>	<b>Societal:</b> The public must support the overall implementation strategy and specified mitigation actions. The projects will be evaluated in terms of community acceptance and societal benefits.	1	Low community support or few societal benefits
		2	Moderate community support or some societal benefits
		3	High community support or many societal benefits
<b>A</b>	<b>Administrative:</b> 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 staff requirements - outside staffing required
		2	Some outside staffing may be needed
		3	Low staffing requirements – no outside staffing required
<b>F</b>	<b>Financial:</b> The projects will be evaluated on general cost-effectiveness and whether additional outside funding will be required.	1	Low cost-effectiveness or mostly outside funding required
		2	Moderate cost-effectiveness or some outside funding required
		3	High cost-effectiveness or no outside funding required
<b>E</b>	<b>Environmental:</b> The projects will be evaluated for any immediate or long-term negative environmental impacts caused by their construction or operation.	1	Many negative environmental impacts, some long-term
		2	Some negative environmental impacts, possibly long-term
		3	Few negative environmental impacts, none long-term
<b>T</b>	<b>Technical:</b> 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	Additional actions will be needed or short-term fix
		2	Additional actions may be needed
		3	Long-term fix or no other actions needed

The following Project List provides an overview of all the Sumner County Hazard Mitigation Committee projects. This includes potential funding sources, implementation timeframes, the project's responsible agency, and other information. The Project List will remain active and may be updated throughout the 5-year life-cycle of the plan. The priority categories of high, medium and low are based on a variety of factors, including (but not limited to):

- Urgency
- Value
- Cost
- Timing
- ROI (Return on Investment)
- Marketing or public relations concerns

Using the Safe-T methodology, projects receiving a score of 4-9 are ranked low, a score of 10-12 receive a score of medium, and higher than 12 receives a score of high priority. Updating the Project List to add or remove a project may be necessary after a disaster or other event. Updates could include adding or modifying projects to address unforeseen issues or removing projects that are no longer feasible or relevant. The Sumner County Hazard Mitigation Planning Committee will notify the Tennessee Emergency Management Agency (TEMA) of additions or changes to the Project List. TEMA will notify FEMA to ensure that official copies of the Sumner County Hazard Mitigation Plan on file with TEMA and FEMA are updated appropriately.

## Sumner County Project List

Priority	Name of Project	Description of Project	Hazards Mitigated	Funding Source	Addresses New or Existing Buildings	Jurisdiction (Location)	Agency Responsible for Implementation	Estimated Costs	Status					Timeframe for Completion	Status
									Current	Completed	Delayed	Deferred	If Deferred, Why?		
Medium	Emergency Response Fund	Installation of fuel pumps at Public Works Facility (powered by back up generator) to enable City emergency response during power outage or fuel shortage.	Flood/Firestorm/Winter Storm/Earth quakes	HMGP, FEMA, TOOT, General, ACOE	Both	Gallatin	Public Works	5K	X					<1yr	Preliminary design and two utility being completed
Medium	Public Drainage Infrastructure Study	Identification and improvement of deficient public drainage infrastructure systems.	Flood/flash flood	HMGP, FEMA, TOOT, General, ACOE	Both	Gallatin	Public Works	200K +	X					Ongoing	Some projects underway, but is dependent on annual budgeted funds.
High	Storm Shelter Database	Formulate, assemble and maintain storm shelter database for City of Gallatin, use during post - to model flood weather incident to check and fine any possible trapped inside shelter by public.	Tornado	General	Both	Gallatin	Fire Dept, IT GIS	\$5,000						1-2 yrs	Not Started
High	Drainage Study	Study the areas where road closures are prone due to heavy rains & make improvements as necessary	Flood/flash flood	HMGP, FEMA, ACOE, General	Existing	All jurisdictions	City Public Works	Not available at this time							New
High	East Camp Creek, Gallatin, Tennessee Continuing Authorities Program Section 205 Feasibility Cost Share Agreement	This project involves the development of alternatives for reducing flood risk within the East Camp Creek watershed within Gallatin, TN	Flood/flash flood	US ACOE	Both	Gallatin	U.S Army Corps of Engineers/ENR Engineering/City Public Works	Not available at this time	X					>5 yr	The study is under contract with ACOE (May 2015), Feasibility Study started April 2015, ACOE will complete screening of measures September 2017
Medium	Public Information & Warning	Provide a weather radio as well as training with the radio to each LM residence in Sumner County. Estimates are based on the 2010 census population of 5,028 LM residences in Sumner County, estimated costs are \$ 600 per unit x 5,028 residences = \$302,448	Flood/flash flood	HMGP, FEMA, ACOE, General	Existing	Sumner County	EMA	\$80,448							New
Medium	GIS	Identify business/continuity/disaster recovery options for critical GIS Services in the event the primary location of servers become unavailable	Tornado/High Winds/Winter Storm/Earth quakes	General	Both	Gallatin	City IT	Not available at this time						1-2 yrs	Not Started
Low	Public Information & Warning	Provide & distribute pamphlets on how to stay safe in natural, technological and man-made hazards		HMGP, FEMA, ACOE, General	Existing	All jurisdictions	EMA	\$20,000							New
Low	Property Acquisition	Consider buy out and tear down of buildings with recurrent flooding. Buildings experience recurrent flooding, are located in FEMA A flood zones. South Waters Avenue between East Bluffs and East Winchester streets	Flood/flash flood	HMGP, FEMA, ACOE, General	Existing	Gallatin	City Public Works	Not available at this time				X	no \$	>5 yr	Not completed, funding not available and overlaps with other potential projects
Low	Property Acquisition	Consider buy out and tear down of buildings with recurrent flooding. Homes experience recurrent flooding, are located in FEMA A flood zones. Merrill Street & Bluff Street	Flood/flash flood	HMGP, FEMA, ACOE, General	Existing	Gallatin	City Public Works	Not available at this time				X	no \$	>5 yr	Not completed, funding not available and overlaps with other potential projects

## Section 4: Mitigation Strategy

Priority	Name of Project	Description of Project	Hazards Mitigated	Funding Source	Addresses New or Existing Bulky Items	Jurisdiction (Location)	Agency Responsible for Implementation	Estimated Costs	Status				Timeframe for Completion	Status
									Current	Completed	Deferred	Deferred, Why?		
Low	Property Acquisition	Consider buy out and tear down of buildings with recurrent flooding. One home experiences recurrent flooding, are located in FEMA flood zone, very end of Nolting Hill Drive past Pittman drive.	Flood/flash flood	HMGP, FEMA, ACOE, General	Existing	Gallatin	City, Public Works	\$200,000				X	>5 yr	Not completed; funding not available and overlaps with other potential projects
Low	Property Acquisition	Consider buy out and tear down of buildings with recurrent flooding. Home experience recurrent flooding, are located in FEMA flood zone. The entire length of Branch Creek Rd and the section from the intersection of Branch Creek and Bradford through to Red River Road (between two unnamed tributaries to East Station Camp Creek)	Flood/flash flood	HMGP, FEMA, ACOE, General	Existing	Gallatin	City, Public Works	Not available at this time				X	>5 yr	Not completed; funding not available and overlaps with other potential projects

## Project List Update

After reviewing the original list of mitigation projects seen in the 2011 Sumner County Hazard Mitigation Plan, the mitigation committee has determined that some of the listed “mitigation” projects were actually “preparedness” projects. Preparedness projects assist people to react or respond more efficiently to threats (*example: putting a fire extinguisher in a room so someone could use it to react to a fire threat*) *whereas* mitigation projects are meant to be long-term projects that utilities the built environment in a way that doesn’t necessarily require people to react because the project itself does the reacting (*example: putting fire retardant material in the walls of a room*). The Williamson County Hazard Mitigation Committee has chosen to keep them in the updated mitigation action list, since these projects will still be worked on in the community.

Sumner County has transferred two projects from the original plan to the updated plan (deferred projects): elevating roads, replace culverts, & retrofit schools/safe rooms. These projects have remained deferred because of funding difficulties.

Sumner County at this time has completed several project(s) listed in the previous plan, including early warning sirens and public education.

Sumner County has also added a number of new projects to the listing as seen on the project list.

## 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 Sumner County, the cities of Gallatin, Goodlettsville, Hendersonville, Millersville, Mitchellville, Portland, Westmoreland, and White House are NFIP participants. FEMA has listed these jurisdictions to have a current effective map date as of September 17, 2010. Below is an overview of NFIP policy and loss data for Sumner County.

Policies In-force: 901

## Section 5: Plan Maintenance

Insurance In-force whole: \$249,276,200

Written Premium In-force: \$614,340

Total Losses: 512

Closed Losses: 402

Open Losses: 2

CWOP Losses: 108

Total Payments: \$ 10,237,620.12

According to the National Flood Insurance Program, repetitive flood loss is defined as a facility or structure that has experienced two or more insurance claims of at least \$1,000 in any given 10 year period since 1978. Within the NFIP, repetitive flood loss properties are usually considered the most vital structures to mitigate. The chart below provides a summary of repetitive losses for Sumner County.

Sumner County Repetitive Loss Properties						
Jurisdiction	Structure Type	Flood Zone	Number of Losses	Total Building Payment	Total Contents Payment	Total Paid
City of Gallatin	Single Family	X	6	\$ 135,571.94	\$ 4,695.57	\$ 140,267.51
City of Hendersonville	Single Family	AE	5	\$ 54,868.78	\$ -	\$ 54,868.78
City of Hendersonville	Single Family	AE	5	\$ 147,732.27	\$ 10,500.00	\$ 158,232.27
City of Hendersonville	Single Family	AE	4	\$ 186,905.42	\$ 15,864.56	\$ 202,769.98
City of Gallatin	Single Family	X	6	\$ 135,571.94	\$ 4,695.57	\$ 140,267.51
City of Hendersonville	Single Family	AE	2	\$ 2,050.73	\$ 9,423.08	\$ 11,473.81
City of Hendersonville	Single Family	AE	3	\$ 30,635.39	\$ -	\$ 30,635.39
City of Hendersonville	Single Family	X	4	\$ 48,601.11	\$ 10,300.49	\$ 58,901.60
City of Hendersonville	Single Family	A	3	\$ 31,879.44	\$ -	\$ 31,879.44
City of Hendersonville	Single Family	AE	2	\$ 18,421.88	\$ -	\$ 18,421.88
City of Hendersonville	Single Family	AE	4	\$ 26,353.45	\$ -	\$ 26,353.45
City of Hendersonville	Single Family	AE	2	\$ 8,601.86	\$ 2,957.63	\$ 11,559.49
City of Hendersonville	Single Family	AE	2	\$ 60,296.22	\$ -	\$ 60,296.22
City of Gallatin	Single Family	X	2	\$ 13,889.75	\$ -	\$ 13,889.75
City of Gallatin	Single Family	A	2	\$ 25,565.78	\$ 8,009.68	\$ 33,575.46
City of Gallatin	Single Family	AE	2	\$ 79,183.69	\$ 4,490.51	\$ 83,674.20
City of Hendersonville	Single Family	AE	2	\$ 9,587.36	\$ -	\$ 9,587.36
City of Hendersonville	Single Family	AE	2	\$ 23,449.74	\$ -	\$ 23,449.74
City of Hendersonville	Single Family	AE	5	\$ 54,868.78	\$ -	\$ 54,868.78
City of Hendersonville	Single Family	X	2	\$ 13,763.74	\$ -	\$ 13,763.74
City of Hendersonville	Single Family	A	2	\$ 18,775.44	\$ -	\$ 18,775.44
City of Hendersonville	Single Family	AE	2	\$ 15,445.96	\$ -	\$ 15,445.96
City of Hendersonville	Single Family	X	2	\$ 10,668.63	\$ 22,118.08	\$ 32,786.71
City of Hendersonville	Single Family	X	1	\$ 9,558.39	\$ -	\$ 9,558.39
City of Gallatin	Single Family	AE	3	\$ 82,913.59	\$ -	\$ 82,913.59
City of Gallatin	Single Family	AE	2	\$ 68,952.15	\$ -	\$ 68,952.15
City of Gallatin	Single Family	AE	2	\$ 58,024.62	\$ -	\$ 58,024.62
City of Gallatin	Single Family	X	2	\$ 14,453.84	\$ -	\$ 14,453.84

## Section 5: Plan Maintenance

Sumner County Repetitive Loss Properties						
Jurisdiction	Structure Type	Flood Zone	Number of Losses	Total Building Payment	Total Contents Payment	Total Paid
Town of Cottontown	Single Family	C	2	\$ 3,113.97	\$ 225.29	\$ 3,339.26
City of Hendersonville	Single Family	AE	2	\$ 3,010.11	\$ -	\$ 3,010.11
City of Gallatin	Single Family	X	2	\$ 12,681.84	\$ -	\$ 12,681.84
City of Gallatin	Single Family	X	3	\$ 74,791.59	\$ -	\$ 74,791.59
City of Hendersonville	Single Family	X	3	\$ 70,041.55	\$ 14,061.92	\$ 84,103.47
City of Gallatin	Single Family	AE	3	\$ 9,204.55	\$ 4,052.60	\$ 13,257.15
City of Gallatin	Single Family	X	2	\$ 34,949.83	\$ 5,131.74	\$ 40,081.57
City of Gallatin	Single Family	X	2	\$ 63,812.54	\$ 7,647.85	\$ 71,460.39
City of Gallatin	Single Family	X	2	\$ 13,861.96	\$ -	\$ 13,861.96
City of Gallatin	Single Family	X	2	\$ 19,481.40	\$ 8,074.24	\$ 27,555.64
City of Gallatin	Single Family	X	2	\$ 6,875.65	\$ 1,063.84	\$ 7,939.49
City of Gallatin	Single Family	X	2	\$ 39,521.95	\$ 14,653.65	\$ 54,175.60
City of Hendersonville	Single Family	AE	2	\$ 30,074.40	\$ -	\$ 30,074.40
Town of Castalian Springs	Single Family	X	2	\$ 18,354.03	\$ 596.65	\$ 18,950.68
City of Hendersonville	Single Family	X	2	\$ 9,169.83	\$ -	\$ 9,169.83
City of Hendersonville	Single Family	X	2	\$ 33,241.68	\$ 8,399.25	\$ 41,640.93
City of Hendersonville	Single Family	X	2	\$ 25,102.04	\$ 7,390.92	\$ 32,492.96
City of Hendersonville	Single Family	X	2	\$ 23,238.48	\$ 1,194.95	\$ 24,433.43
City of Gallatin	Single Family	AE	2	\$ 16,351.00	\$ -	\$ 16,351.00
City of Gallatin	Single Family	A04	2	\$ 36,558.69	\$ 2,206.12	\$ 38,764.81
City of Gallatin	Single Family	AE	2	\$ 156,318.32	\$ -	\$ 156,318.32
Town of Castalian Springs	Single Family	X	2	\$ 8,761.10	\$ 16,390.34	\$ 25,151.44
City of Hendersonville	Single Family	X	2	\$ 14,140.70	\$ -	\$ 14,140.70
City of Gallatin	Single Family	AE	2	\$ 154,311.67	\$ 56,723.18	\$ 211,034.85
City of Gallatin	Single Family	AE	2	\$ 26,288.26	\$ -	\$ 26,288.26
City of Gallatin	Single Family	B	2	\$ 38,216.89	\$ -	\$ 38,216.89
City of Gallatin	Single Family	A	2	\$ 93,036.33	\$ -	\$ 93,036.33
City of Hendersonville	Single Family	AE	2	\$ 6,509.37	\$ -	\$ 6,509.37
Town of Bethpage	Busi-Nonres	A	2	\$ 2,484.88	\$ 10,000.00	\$ 12,484.88
Town of Cottontown	Single Family	AE	2	\$ 160,892.49	\$ 29,111.74	\$ 190,004.23
Town of Cottontown	Single Family	A	2	\$ 154,510.40	\$ 16,800.00	\$ 171,310.40
Town of Cottontown	Single Family	A04	2	\$ 96,927.50	\$ -	\$ 96,927.50

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

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

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

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

Monitoring activities will involve Sumner County Emergency Management setting up a committee meeting to be held on an annual basis. Sumner County Emergency Management 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 critical facilities list, 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 HMGP grant funding. For the five year update, Sumner County Emergency Management will notify the jurisdictional governments and the Sumner 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 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 Sumner 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 Sumner County Emergency Management.

Five months prior to the plan's expiration date, Sumner County Emergency Management 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 Sumner 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 Mechanisms**

By incorporating the Sumner County Hazard Mitigation Plan into other planning documents and mechanisms, 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 into which the Sumner County Hazard Mitigation Plan could be incorporated include:

- Sumner County Basic Emergency Operations Plan (BEOP)
- City of Gallatin] and City of Hendersonville Zoning Ordinance
- City of Gallatin & City of Hendersonville Floodplain Ordinance
- City of Gallatin Subdivision Regulations
- Sumner County School Safety Plan

The process of incorporating the hazard mitigation plan into other plans will begin during the other plan's update cycles. Sumner County Emergency Management will first review the plans side-by-side, and where deemed necessary, Emergency Management will make 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 Sumner 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 local newspapers of general circulation, by providing public access to copies of the Sumner 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.

# APPENDICES

- A. Planning Meeting 1 information
  - i. Sign-In Sheet
  - ii. Minutes
- B. Planning Meeting 2 information
  - i. Sign-In Sheet
  - ii. Public Notices
  - iii. Public Comments
- C. Planning Meeting 3 information
  - i. Sign-In Sheet
  - ii. Public Notices
  - iii. Public Comments
- D. Flood Insurance Rate Maps (FIRMS) – Sumner County
- E. HAZUS Flood Model – Sumner County

# Appendix A

## A: Planning Meeting 1 Information

### i. Sign-in Sheet – Meeting 1

**SUMNER COUNTY**  
EMERGENCY MANAGEMENT

**SUMNER COUNTY EMERGENCY MANAGEMENT**  
255 AIRPORT RD., GALLATIN, TN. 37066  
PHONE 615-452-7584 FAX 615-451-0171

**E.O.C**

SIGN-IN SHEET DATE: 09/02/2016

OPERATION: Hazard Mitigation Plan Renewal Kick-off SHEET: 1 OF 1

	NAME	AGENCY	PHONE NUMBER	E-MAIL
1	John W. Weidner	SUMNER EMA	615-452-7584	john.w.weidner@sumner-tn.gov
2	Jordan Edwards	HERNDONVILLE MEDICAL	615-737-1264	jordan.edwards@herndonville-med.com
3	Logan Smith	City of Gallatin IT	615-451-5832	logan.smith@cityofgallatin-tn.gov
4	Mark Loy	Hillbillyville Fire Dept	615-809-0590	mark.loy@cityofhillbillyville.com
5	Neil Allen Lewis	EMA / ASSESSOR	615-566-7827	neil.lewis@sumner-tn.gov
6	Donna Newman	Portland P.D.	615-275-3401	donnewman@cityofportland-tn.gov
7	Michael Summers	SP-EMA	615-624-5495	michael.summers@sumner-tn.gov
8	Al West	Rockwell Fire Dept	615-466-1265	alwest@rockwellfiredept.com
9	Alison Cobb	Portland Grammar	615-815-6776	alison.cobb@portland-tn.gov
10	John Atkinson	Tenn	615-452-9024	john.atkinson@sumner-tn.gov

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**E.O.C**

SIGN-IN SHEET DATE: 09/02/2016

OPERATION: Hazard Mitigation Plan Renewal Kick-off SHEET: 1 OF 1

	NAME	AGENCY	PHONE NUMBER	E-MAIL
1	Michael Helt	HFD	615-415-7483	michael.helt@hfd.com
2	Janel Rogen	H.P.D.	615-828-4359	janel.rogen@hpd.com
3	Kevin Tamm	H.F.D.	615-444-6107	kevin.tamm@hfd.com
4	Tommy Tamm	H.F.D.	615-452-2771	tommy.tamm@hfd.com
5	Robert Richie	GFD	615-452-2771	robert.richie@cityofgallatin-tn.gov
6	Bill McCool	Gallatin Planning Dept	615-451-5756	bill.mccool@cityofgallatin-tn.gov
7	Ruth Williams	Public Works	615-451-5615	ruth.williams@cityofgallatin-tn.gov

### ii. Minutes – Meeting 1

EMA Director Ken Weidner opened the meeting.

Copies of FEMA planning documents were provided to members. Tracey Davis, TEMA Regional Planner, reviewed the hazard mitigation planning process and suggested a course of action for effective use of the committee's time.

## Appendix A: Planning Meeting 1 Information

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Issues since the current Plan were discussed and several members mentioned progress made. Committee members were given a one-page Hazard Mitigation Planning questionnaire and printed copies of examples of hazard mitigation best practices from the FEMA website (<https://www.fema.gov/best-practice-stories>) in preparation for the next meeting, and a date of September 29, 2016 was set for Meeting # 2.

Meeting was adjourned.

# Appendix B

## B: Planning Meeting 2 Information

### i. Sign-in Sheet – Meeting 2

SUMNER COUNTY  
EMERGENCY MANAGEMENT

SUMNER COUNTY EMERGENCY MANAGEMENT  
255 AIRPORT RD., GALLATIN, TN. 37066  
PHONE 615-452-7584 FAX 615-451-0171

**E.O.C**

SIGN-IN SHEET DATE: 9/29/2016

OPERATION: Hazard Mitigation Plan Update SHEET: 1 OF 1

NAME	AGENCY	PHONE NUMBER	E-MAIL
1. <u>Adi Warden</u>	<u>Sumner EMA</u>	<u>615-452-7584</u>	<u>warden@sumnercounty.org</u>
2. <u>Michael Bagg</u>	<u>Manchester</u>	<u>615-555-0880</u>	<u>development@cityofmanchestertn.com</u>
3. <u>Robert Ritchie</u>	<u>Gallatin Fire</u>	<u>615-452-2771</u>	<u>robert.ritchie@gallatin-tn.gov</u>
4. <u>Julia Vannoy</u>	<u>Gallatin PD</u>	<u>615-452-2771</u>	<u>humbler@cityofgallatin-tn.gov</u>
5. <u>Abraham Harnish</u>	<u>Gallatin Park Management</u>	<u>615-240-0181</u>	<u>abraham.harnish@gallatin-tn.gov</u>
6. <u>Ken Smiley</u>	<u>Gallatin AT Dept</u>		<u>Ken.Smiley@Gallatin-tn.gov</u>
7. <u>Brian Fann</u>	<u>Hendersonville Fire</u>	<u>615-414-6197</u>	<u>brian@hendersonville.org</u>
8. <u>Kevin Vannoy</u>	<u>City of Hendersonville</u>	<u>615-590-4141</u>	<u>Kevin.Vannoy@cityofhendersonville.org</u>
9. <u>Chip Moore</u>	<u>City of Hendersonville</u>	<u>615-590-5341</u>	<u>chip.moore@cityofhendersonville.org</u>
10. <u>Ken Smiley</u>	<u>City of Gallatin</u>	<u>615-451-5842</u>	<u>Ken.Smiley@cityofgallatin-tn.gov</u>
11. <u>Patrick Reedy</u>	<u>City of White House</u>	<u>615-394-1071</u>	<u>Patrick.Reedy@cityofwhitehouse.com</u>
12. <u>David A. Rendon</u>	<u>City of White House</u>	<u>615-394-0057</u>	<u>drendon@cityofwhitehouse.com</u>
13. <u>Steve Smith</u>	<u>White House PD</u>	<u>615-394-3272</u>	<u>PSmith@whitehouse-tn.gov</u>
14. <u>Wesley Langston</u>	<u>International PD</u>	<u>615-452-2112</u>	<u>Wesley.Langston@intltn.com</u>
15. <u>Paul Allen Barnes</u>	<u>Sumner Attorney</u>	<u>615-452-2412</u>	<u>Paul.Barnes@sumnercounty.org</u>
16. <u>Andrew Pierce</u>	<u>City of Portland</u>	<u>615-555-6770</u>	<u>Andrew.Pierce@cityofportlandtn.gov</u>
17. <u>Al West</u>	<u>Portland Fire Dept.</u>	<u>615-555-1215</u>	<u>awest@cityofportlandtn.gov</u>
18. <u>Mark Beckwith</u>	<u>Greethville Fire Dept.</u>	<u>615-420-0169</u>	<u>mbeckwith@cityofgreethville.com</u>
19. <u>Steve McNeill</u>	<u>Greethville Fire Dept.</u>	<u>615-420-0169</u>	<u>Steve.McNeill@cityofgreethville.com</u>
20. <u>David Okun</u>	<u>Greethville Fire Dept.</u>	<u>615-420-0169</u>	<u>dokun@cityofgreethville.com</u>
21. <u>Kevin Smith</u>	<u>City of Gallatin Engineering</u>	<u>615-414-7257</u>	<u>Kevin.Smith@cityofgallatin-tn.gov</u>
22. <u>Mark Tuttle</u>	<u>City of Portland</u>	<u>615-555-6770</u>	<u>Mark.Tuttle@cityofportlandtn.gov</u>
23. <u>William Smith</u>	<u>City of Portland</u>	<u>615-555-6770</u>	<u>William.Smith@cityofportlandtn.gov</u>
24. <u>Ruby Ellis</u>	<u>Portland Police</u>	<u>615-555-2400</u>	<u>Ruby.Ellis@cityofportlandtn.gov</u>

SUMNER COUNTY  
EMERGENCY MANAGEMENT

SUMNER COUNTY EMERGENCY MANAGEMENT  
255 AIRPORT RD., GALLATIN, TN. 37066  
PHONE 615-452-7584 FAX 615-451-0171

**E.O.C**

SIGN-IN SHEET DATE: 9/29/2016

OPERATION: Hazard Mitigation Plan Update SHEET: 1 OF 1

NAME	AGENCY	PHONE NUMBER	E-MAIL
1. <u>Mark Cox</u>	<u>Greethville Fire Dept.</u>	<u>615-420-0169</u>	<u>Mark.Cox@cityofgreethville.com</u>
2. <u>Brandon Head</u>	<u>Manchester Lakes Dept.</u>	<u>615-555-0880</u>	<u>Brandon.Head@cityofmanchestertn.com</u>
3. <u>Chuck Street</u>	<u>Gallatin County Dept.</u>	<u>615-452-2771</u>	<u>chuck.street@gallatin-tn.gov</u>
4. <u>William McCann</u>	<u>Gallatin Police Dept.</u>	<u>615-452-2771</u>	<u>William.McCann@gallatin-tn.gov</u>
5. <u>Steve Fennell</u>	<u>Greethville Fire Dept.</u>	<u>615-420-0169</u>	<u>Steve.Fennell@cityofgreethville.com</u>
6. <u>Blair Moore</u>	<u>Greethville Fire Dept.</u>	<u>615-420-0169</u>	<u>Blair.Moore@cityofgreethville.com</u>
7. <u>Marshall Langston</u>	<u>Sumner Co. Police</u>	<u>615-452-2412</u>	<u>Marshall.Langston@sumnercounty.org</u>
8. <u>Natlie Fennell</u>	<u>Sumner Co. Police</u>	<u>615-452-2412</u>	<u>Natlie.Fennell@sumnercounty.org</u>
9. <u>Ken Smith</u>	<u>City of Gallatin</u>	<u>615-414-7257</u>	<u>Ken.Smith@cityofgallatin-tn.gov</u>
10. <u>Ken Smith</u>	<u>City of Gallatin</u>	<u>615-414-7257</u>	<u>Ken.Smith@cityofgallatin-tn.gov</u>
11. <u>RACHAEL WILSON</u>	<u>City of Gallatin</u>	<u>615-414-7257</u>	<u>RACHAEL.WILSON@GALLATIN-TN.GOV</u>
12. <u>Kevin Lloyd</u>	<u>Greethville Fire Dept.</u>	<u>615-420-0169</u>	<u>Kevin.Lloyd@cityofgreethville.com</u>
13. <u>Denise Farris</u>	<u>Greethville Fire Dept.</u>	<u>615-420-0169</u>	<u>Denise.Farris@cityofgreethville.com</u>



## **ii. Minutes - Meeting 2**

EMA Director Ken Weidner opened the meeting.

Copies of event data from 2011-2016 were provided to committee members.

The current Project List was provided to members. There was some discussion about keeping weather radios and warning sirens on the project list. It was understood that radios and sirens are considered preparedness and mitigation, and the committee agreed to keep them on the project list so they remain visible as a priority for the county.

Much discussion was given to updating the project list for the county, particularly identification of the public/private collaborative projects.

Meeting was adjourned.



# Appendix C

## C: Planning Meeting 3 Information

### i. Public Notices – Meeting 3

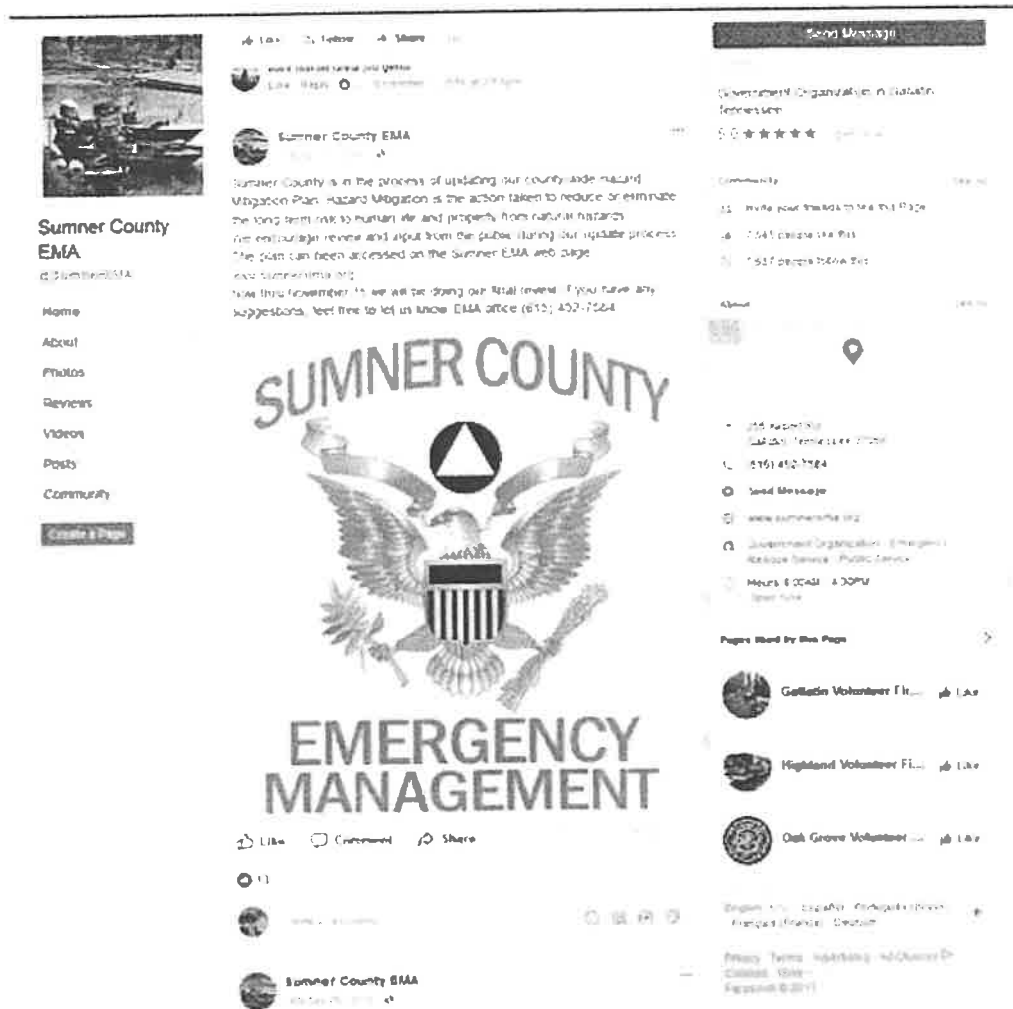
To encourage public involvement, the Sumner County Hazard Mitigation Committee advertised their third committee meeting for November 17, 2016 to the county and neighboring communities during a radio interview on local radio station 1010 WHIN on October 7, 2017 and again on November 14, 2016:

<https://www.whinradio.com/>



Meeting # 3 was also advertised on the Sumner County Emergency Management public page, which is followed by 7,687 people and well-known in the community. It is accessible to all residents in the county and neighboring counties at:

<https://www.facebook.com/SumnerEMA/>



## ii. Minutes - Meeting 3

EMA Director Ken Weidner opened the meeting.

Copies of the priority list and SAFE-T project prioritization method were provided to members.

Items on the priority list were reviewed in the order they had been suggested, then rated using the SAFE-T methodology by a show of hands. When the committee did not immediately agree on a score there was a discussion, with the final rating deferred by the committee to representatives of that jurisdiction. Consensus was reached on the scoring and prioritization of each project.

Meeting was adjourned.

# Appendix D

## E: HAZUS Flood Model – Sumner County

### Hazus-MH: Flood Event Report

**Region Name:** SumnerCo2

**Flood**  
100-year flood

**Scenario:**

**Print Date:** Friday, March 11, 2016

**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.*

## Table of Contents

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General Building Stock Essential Facility Inventory	
Flood Scenario Parameters	5
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General Building Stock Essential Facilities Damage	
Induced Flood Damage	8
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Shelter Requirements	
Economic Loss	9
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## 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 543 square miles and contains 3,804 census blocks. The region contains over 61 thousand households and has a total population of 160,645 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 62,012 buildings in the region with a total building replacement value (excluding contents) of 18,267 million dollars (2010 dollars). Approximately 92.76% of the buildings (and 80.96% of the building value) are associated with residential housing.

## Building Inventory

### General Building Stock

Hazus estimates that there are 62,012 buildings in the region which have an aggregate total replacement value of 18,267 million (2010 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	14,788,964	81.0%
Commercial	2,054,631	11.2%
Industrial	881,048	4.8%
Agricultural	43,338	0.2%
Religion	314,124	1.7%
Government	54,543	0.3%
Education	129,999	0.7%
<b>Total</b>	<b>18,266,647</b>	<b>100.00%</b>

Table 2

#### Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure (\$1000)	Percent of Total
Residential	4,516,424	84.9%
Commercial	524,220	9.9%
Industrial	136,452	2.6%
Agricultural	14,084	0.3%
Religion	75,640	1.4%
Government	13,894	0.3%
Education	39,016	0.7%
<b>Total</b>	<b>5,319,730</b>	<b>100.00%</b>

## Essential Facility Inventory

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 221 beds. There are 54 schools, 12 fire stations, 11 police stations and 2 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:	SumnerCo2
	100-year flood
Scenario Name:	100
	No What-Ifs
Return Period Analyzed:	
Analysis Options Analyzed:	

## Building Damage

### General Building Stock Damage

Hazus estimates that about 689 buildings will be at least moderately damaged. This is over 32% of the total number of buildings in the scenario. There are an estimated 329 buildings that will be completely destroyed. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of 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.

**Table 3: Expected Building Damage by Occupancy**

	1-10		11-20		21-30		31-40		41-50		Substantially	
Occupancy	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Commercial	1	50.00	0	0.00	0	0.00	0	0.00	0	0.00	1	50.00
Education	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Government	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Industrial	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Religion	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Residential	55	7.40	120	16.15	87	11.71	77	10.36	76	10.23	328	44.15
<b>Total</b>	<b>56</b>		<b>120</b>		<b>87</b>		<b>77</b>		<b>76</b>		<b>329</b>	

**Table 4: Expected Building Damage by Building Type**

Building	1-10		11-20		21-30		31-40		41-50		Substantially	
Type	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Manuf/Housing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	100.00
Masonry	0	0.00	4	11.43	4	11.43	3	8.57	2	5.71	22	62.86
Steel	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Wood	55	7.74	118	16.60	84	11.81	75	10.55	74	10.41	305	42.90

## Essential Facility Damage

Before the flood analyzed in this scenario, the region had 221 hospital beds available for use. On the day of the scenario flood event, the model estimates that 221 hospital beds are available in the region.

**Table 5: Expected Damage to Essential Facilities**

Classification	Total	# Facilities		Loss of Use
		At Least Moderate	At Least Substantial	
Fire Stations	12	0	0	
Hospitals	2	0	0	0
Police Stations	11	0	0	
Schools	54	3	2	0
				0
				5

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.

## **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 17,541 tons of debris will be generated. Of the total amount, Finishes comprises 35% of the total, Structure comprises 35% of the total. If the debris tonnage is converted into an estimated number of truckloads, it will require 702 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 1,620 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 3,428 people (out of a total population of 160,645) will seek temporary shelter in public shelters.

## **Economic Loss**

The total economic loss estimated for the flood is 383.77 million dollars, which represents 7.21 % 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 382.68 million dollars. 0% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 70.96% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

**Table 6: Building-Related Economic Loss Estimates**

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
<u>Building Loss</u>						
	Building	182.92	20.97	7.11	4.82	215.83
	Content	89.13	46.77	13.85	13.58	163.32
	Inventory	0.00	1.13	2.27	0.13	3.53
	<b>Subtotal</b>	<b>272.05</b>	<b>68.87</b>	<b>23.24</b>	<b>18.53</b>	<b>382.68</b>
<u>Business Interruption</u>						
	Income	0.00	0.25	0.00	0.03	0.27
	Relocation	0.23	0.03	0.00	0.01	0.28
	Rental Income	0.05	0.02	0.00	0.00	0.07
	Wage	0.00	0.25	0.00	0.21	0.47
	<b>Subtotal</b>	<b>0.28</b>	<b>0.56</b>	<b>0.00</b>	<b>0.25</b>	<b>1.09</b>
ALL	<b>Total</b>	<b>272.33</b>	<b>69.42</b>	<b>23.24</b>	<b>18.78</b>	<b>383.77</b>

**Appendix A: County Listing for the Region**

Tennessee

- Sumner

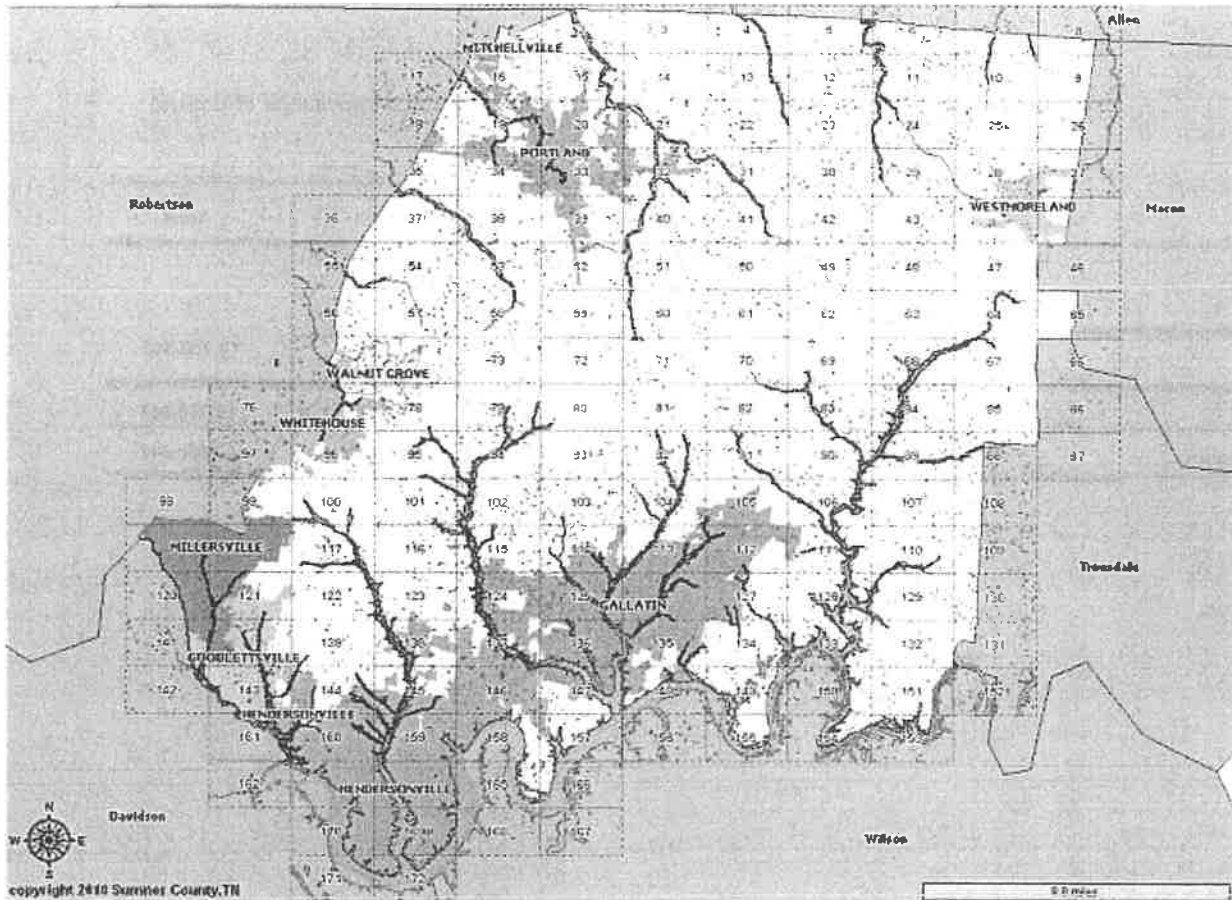
**Appendix B: Regional Population and Building Value Data**

Building Value (thousands of dollars)

	Population	Residential	Non-Residential	Total
Tennessee				
Sumner	160,645	14,788,964	3,477,683	18,266,647
Total	160,645	14,788,964	3,477,683	18,266,647
Total Study Region	160,645	14,788,964	3,477,683	18,266,647

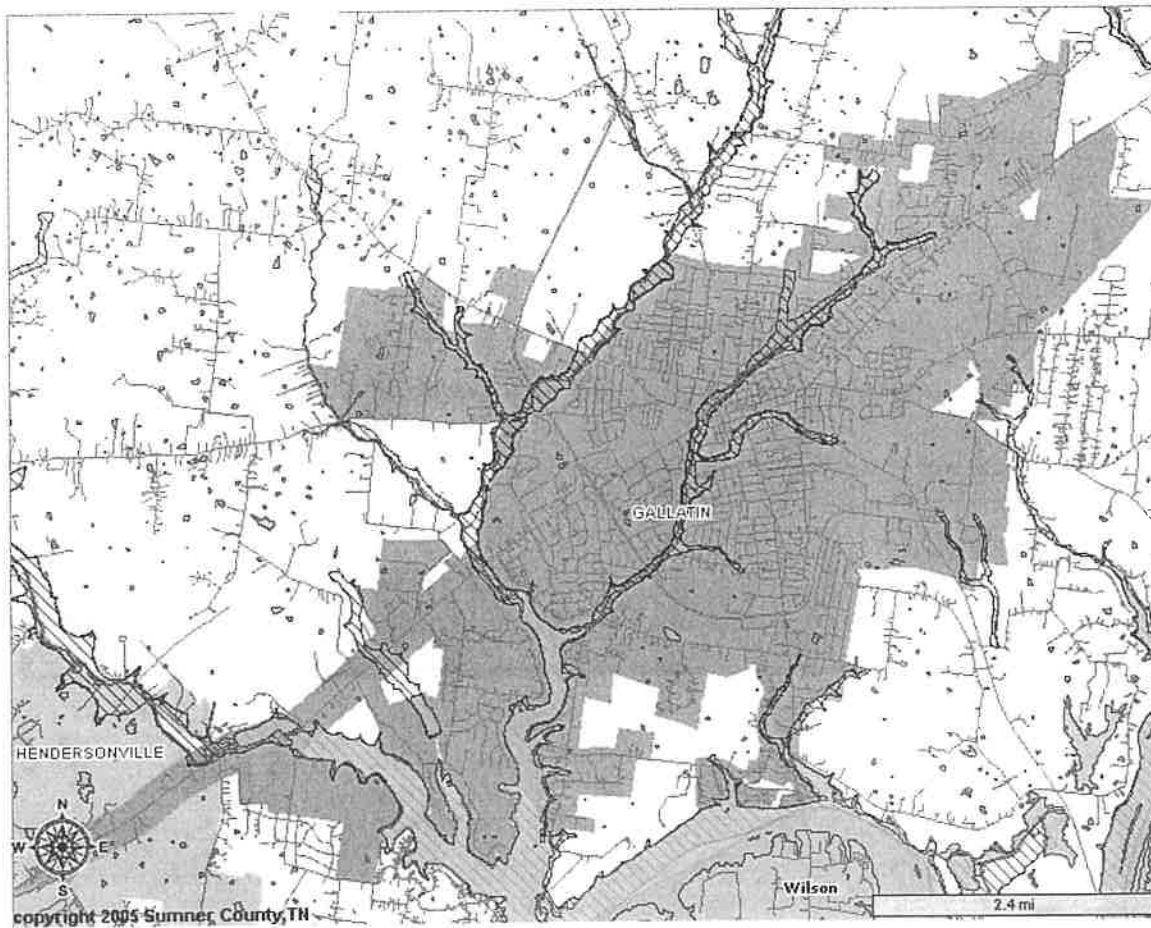
# Appendix E

## E: Sumner County Flood Plain Maps

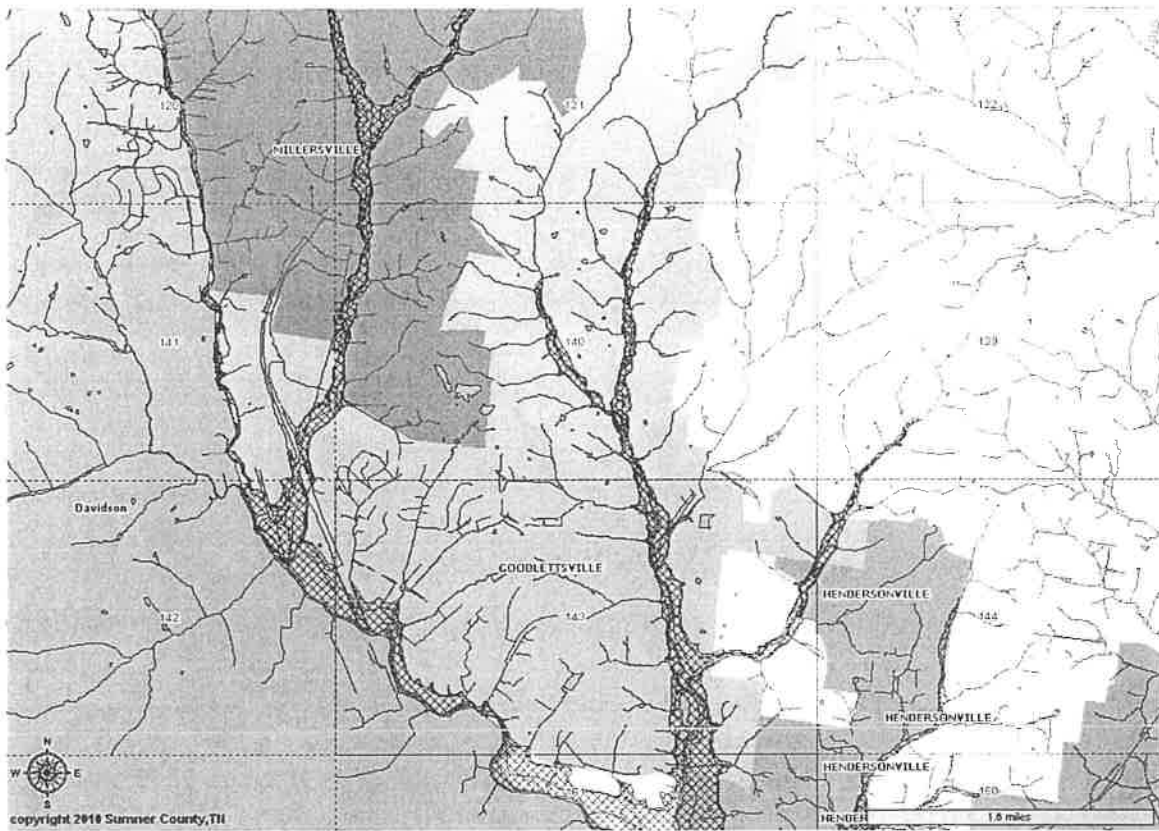


Sumner County

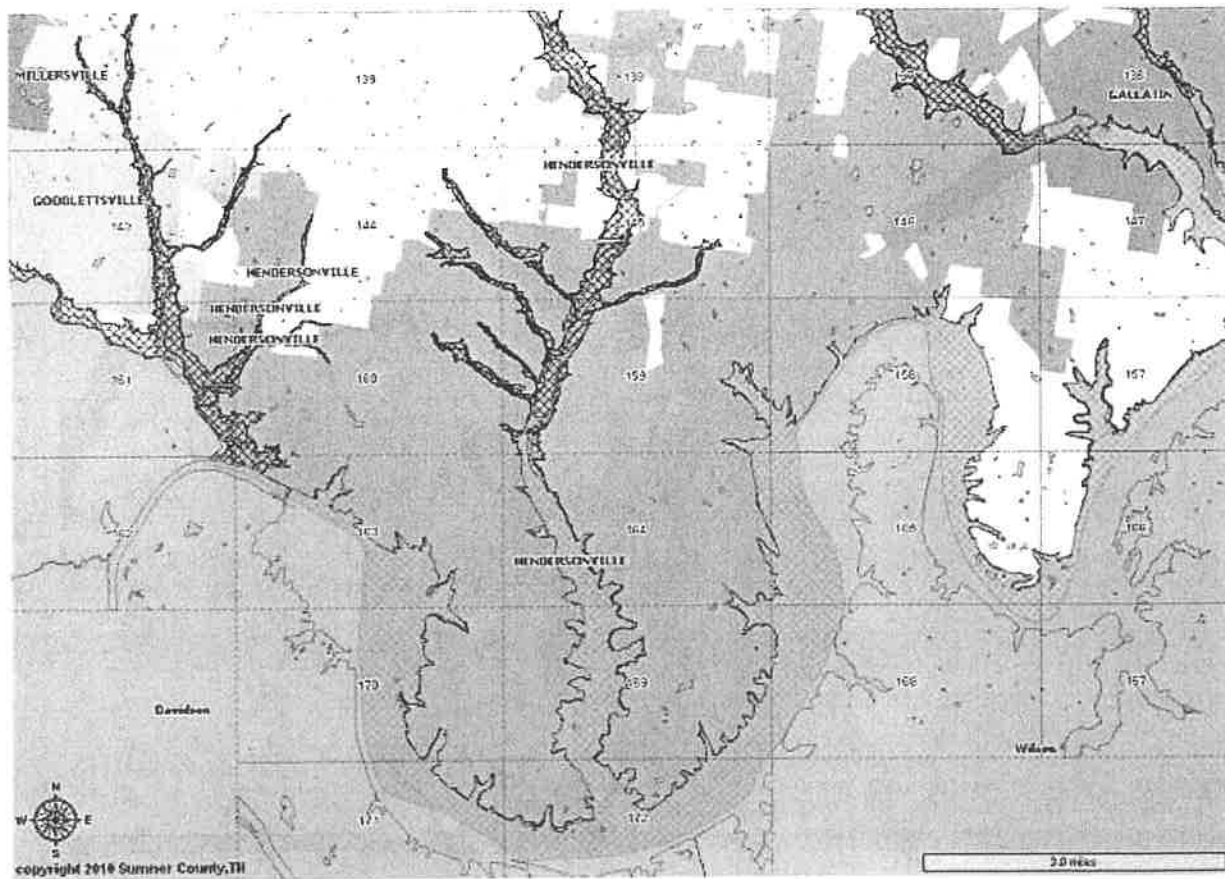
## FLOOD ZONES FOR MUNICIPALITIES



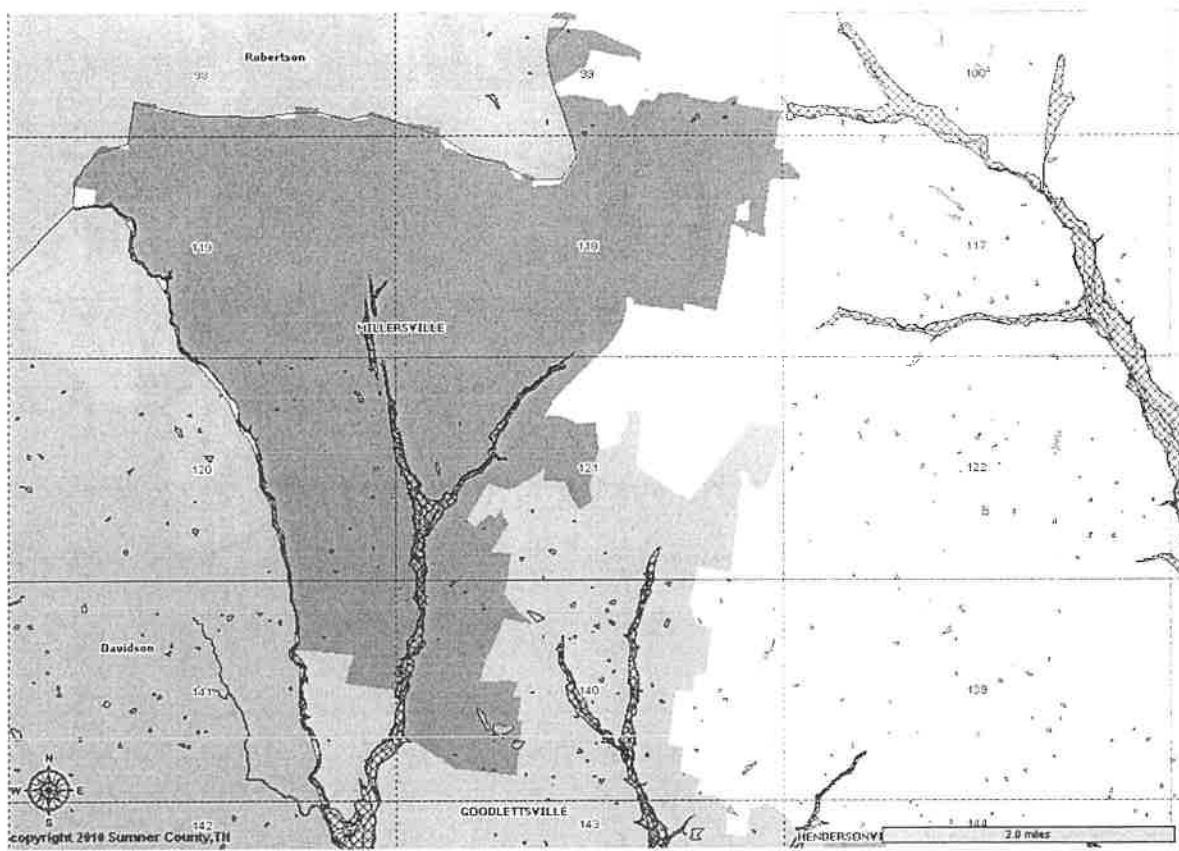
### Gallatin



## Goodlettsville



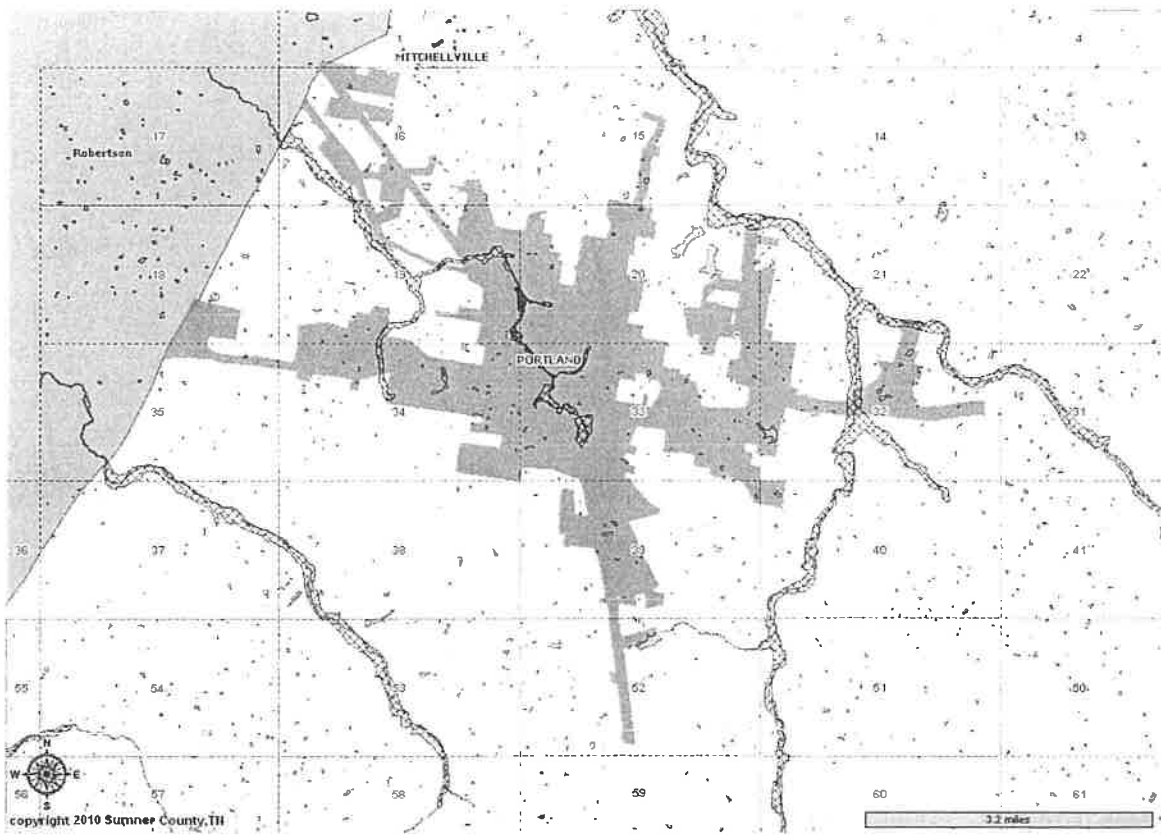
## Hendersonville



## Millersville



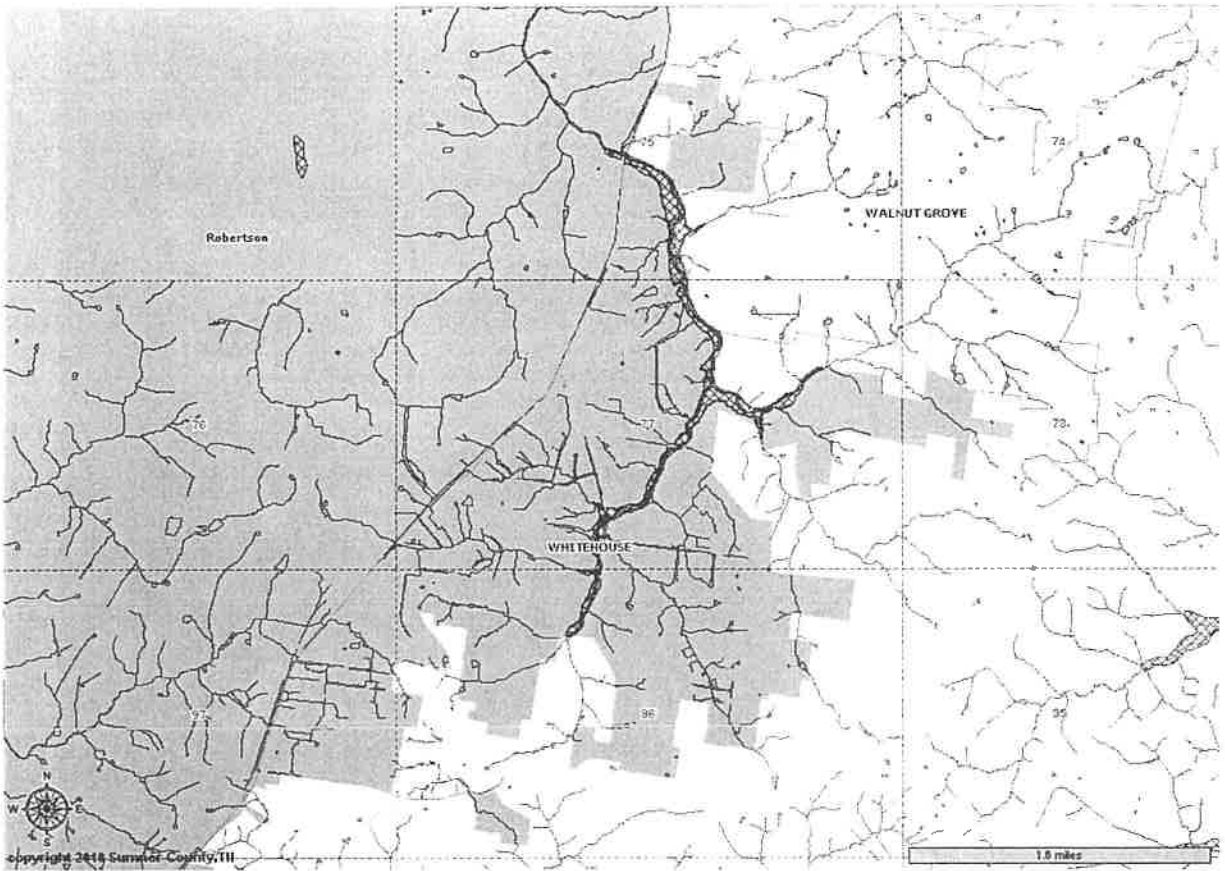
## Mitchellville



## Portland



## Westmoreland



**White House**

# Appendix F

## F: Sumner County Critical Infrastructure

### CRITICAL FACILITIES

Critical facilities are structures that would seriously affect the community if they were severely damaged during a disaster. Structures deemed critical are listed below:

#### NEEDED IMMEDIATELY AFTER AN EVENT (fire, police, EMS, EMA stations)

Gallatin Police Dept	130 W Franklin St	Gallatin
Goodlettsville Police Dept	105 S Main St	Goodlettsville
Hendersonville Police Records	3 Executive Park Dr	Hendersonville
Millersville Police Dept	1246 Louisville Hwy	Goodlettsville
Portland Police Dept	433 N Broadway	Portland
Sumner County Criminal Court	105 Public Sq	Gallatin
Sumner County Sheriff Dept	214 Blackey Bandy Rd	Bethpage
Sumner County Sheriff Dept	2398 HWY 25	Cottontown
Sumner County Sheriff Dept	117 W Smith St	Gallatin
Sumner County Sheriff Dept	708 S Broadway	Portland
Sumner Judge-Criminal Court	Courthouse Fl 2	Gallatin
Westmoreland Police Dept	5300 Austin Peay Hwy # A	Westmoreland
White House Police Dept	105 College St	White House
Oak Grove Volunteer Fire Dept. #1	164 Blackey Bandy Rd.	Bethpage
Oak Grove Volunteer Fire Dept. #2	1000 W. Main St	Portland
Southeast Comm. Fire Dept. #1	3515 Highway 31 E	Bethpage
Southeast Comm. Fire Dept. #2	1011 Hilton Ln.	Castalian Springs
Cottontown Fire Association	2297 Highway 25	Cottontown
Gallatin Fire Dept. #1	119 Chief Billy Crook Blvd.	Gallatin
Gallatin Fire Dept. #2	1480 Nashville Pike	Gallatin
Gallatin Fire Dept. #3	860 Red River Rd.	Gallatin
Gallatin Fire Dept. #4	Big Station Camp Blvd.	Gallatin
Gallatin Fire Dept. #5	Nichols Lane	Gallatin
Gallatin Volunteer Fire Dept. #1	1051-B Old Hwy 109 N.	Gallatin
Gallatin Volunteer Fire Dept. #2	S. Water Ave.	Gallatin
Number One Volunteer Fire Dept.	1314 Douglas Bend Rd.	Gallatin
Goodlettsville Fire Dept.	105 Long Hollow Pike	Goodlettsville
Millersville Fire Dept. #1 (City Hall)	1246 Louisville Hwy	Goodlettsville
Millersville Fire Dept. #2	7515 Bethel Rd.	Goodlettsville
Hendersonville Fire Dept. #1	173 Luna Ln	Hendersonville
Hendersonville Fire Dept. #2 (HQ)	225 Free Hill Rd	Hendersonville
Hendersonville Fire Dept. #3	179 Bonita Pkwy	Hendersonville
Hendersonville Fire Dept. #4	100 Indian Lake Rd.	Hendersonville
Hendersonville Fire Dept. #5	Forrest Retreat Rd.	Hendersonville
Hendersonville Fire Dept. #6	Hwy 31-E & Saundersville Rd.	Hendersonville
Hendersonville Fire Dept. #7	699 W Main St	Hendersonville

Shackle Island Volunteer Fire Dept.	3199 Long Hollow Pike # B	Hendersonville
Millersville Police Dept	1246 Louisville Hwy	Millersville
Millersville Public Works	1246 Louisville Hwy	Millersville
Highland Volunteer Fire Dept. #1	920 S. Broadway	Portland
Highland Volunteer Fire Dept. #2	3301 Hwy 76	Cottontown
Portland City Fire Dept. #1	435 N Broadway	Portland
Westmoreland Volunteer Fire Dept.	1204 Walnut St.	Westmoreland
White House Police Department	303 N. Palmers Chapel	White House
White House Community Fire Dept. #1	1916 Hwy 31-W	White House
White House Community Fire Dept. #2	Hwy 76	White House
White House Fire Dept.#1	416 Highway 76	White House
White House Fire Dept. #2	120 Business Park Dr.	White House
Emergency Management Agency	255 Airport Rd.	Gallatin
Sumner County Health Dept.	1005 Union School Rd.	Gallatin
Tennessee National Guard Armory	1240 Hartsville Pike	Gallatin

➤ **HOUSE NEEDY POPULATIONS** (schools, hospitals, nursing homes, designated shelters)

#### **HOSPITALS/MEDICAL**

Sumner Regional Medical Center	555 Hartsville Pike	Gallatin
Hendersonville Hospital	355 New Shackle Island Road	Hendersonville
North Crest Medical	121 Highway 76	White House
Cross Roads Medical	491 Sage Rd	White House
White House Medical Plaza	121 Raymond Hirsch Pkwy	White House

#### **NURSING HOMES/ASSISTED LIVING**

Emeritus Assisted Living	400 Hancock St.	Gallatin
Golden Living Center	555 E. Bledsoe St.	Gallatin
Gallatin Healthcare Association	438 North Water Ave.	Gallatin
Halltown Residential Home	711 Halltown Rd.	Portland
Highland Manor	215 Highland Circle Dr.	Portland
Morningside	1085 Hartsville Pike	Gallatin
Noles Residential Home for the Aged	622 North Water Ave.	Gallatin
Westmoreland Care and Rehab Center	1559 New HWY 52 E.	Westmoreland
Alterra Sterling House	2025 Caldwell Rd	Goodlettsville
Clairbridge Cottage	3001 Business Park Circle	Goodlettsville
Vanco Manor Convalescent Center	813 South Dickerson Rd	Goodlettsville
Brookfield Gardens Apts.	1201 North First St.	Westmoreland
Oakwood Village Apts.	2021 Oakwood Dr.	Westmoreland

## CHURCHES

College Heights Baptist Church	2100 Nashville Pike	Gallatin
First Baptist Church	205 W. Main St	Gallatin
Gallatin Church of the Nazarene FLC	407 N. Water St.	Gallatin
Hartsville Pike Church of Christ	744 Hartsville Pike	Gallatin
Trinity Lutheran Church	720 Lock 4 Rd.	Gallatin
Volunteer State Community College	1480 Nashville Pike	Gallatin
Gallatin City Hall	132 W. Main St.	Gallatin
Bluegrass Baptist Church	235 Indian Lake Rd.	Hendersonville
Community Church	381 West Main St.	Hendersonville
First Baptist Church of Hendersonville	106 Bluegrass Commons	Hendersonville
First United Methodist Church	217 E. Main St.	Hendersonville
Hendersonville Chapel	310 Raindrop Ln.	Hendersonville
Hendersonville Church of Christ	107 Rockland Rd.	Hendersonville
Highland Academy	211 Highland Cr.	Portland
Highland Seventh Day Adventist Church	100 Highland Cr.	Portland
Westmoreland United Methodist Church	Park St. and Epperson Springs Rd.	Westmoreland
Woodmen Camp Tanasi	325 Lake Westmoreland Rd.	Westmoreland
Church at Grace Park	506 Hester Drive	White House
First United Methodist Church	3403 Highway 31 W	White House
First Baptist Church	2800 Highway 31 W	White House
North Ridge Church	309 Wilkinson Ln	White House
Temple Baptist Church	117 Marlin Rd	White House

## SCHOOLS

Bethpage Elementary School	420 Old Hwy 31E	Bethpage
North Sumner Elementary School	1485 North Sumner Road	Bethpage
Oakmont Elementary School	3323 Highway 76	Cottontown
Benny Bills Elementary	1030 Union School Rd	Gallatin
College Heights Christian Academy	2100 Nashville Pike	Gallatin
Gallatin High School	700 Dan P. Herron Drive	Gallatin
Guild Elementary School	1018 South Water	Gallatin
Howard Elementary School	805 Long Hollow Pk	Gallatin
Joseph Ellington Shafer Middle	240 Albert Gallatin Boulevard	Gallatin
Knox Doss Middle School	281 Big Station Camp Blvd	Gallatin
R T Fischer Alt	455 North Boyers	Gallatin
Rucker Stewart Elementary School	350 Hancock St	Gallatin
Southside Christian School	1028 South Water Ave.	Gallatin
Station Camp Elementary	1020 Bison Trail	Gallatin
Station Camp High School	1040 Bison Trail	Gallatin
Station Camp Middle School	281 Big Station Camp	Gallatin
St. John Vianney Catholic Elementary	North Water Ave.	Gallatin
Sumner Academy	464 Nichols Lane	Gallatin
Sumner Co. Board Of Education Ofc.	695 East Main St.	Gallatin
Union Elementary School	516 Carson St	Gallatin
Vena Stuart Elementary	780 Hart St	Gallatin
Gateway Elementary	Monticello	Goodlettsville
Goodlettsville Elementary	Donald Ave	Goodlettsville

Goodlettsville Middle School	South Main St	Goodlettsville
Madison Creek Elementary	1040 Madison Creek Road	Goodlettsville
Aaron Academy	Gallatin Rd.	Hendersonville
Beech Elementary School	3120 Long Hollow Pk	Hendersonville
Beech High School	3126 Long Hollow Pk	Hendersonville
E B Wilson Night High School	102 Indian Lake Road	Hendersonville
Gene Brown Elementary School	115 Gail Drive	Hendersonville
Hawkins Middle School	487a Walton Ferry Rd	Hendersonville
Hendersonville Bible Kindergarten	107 Rockland Road Po Box 176	Hendersonville
Hendersonville Christian Academy	355 Old Shackle Island Rd	Hendersonville
Hendersonville High School	123 Cherokee Road	Hendersonville
Indian Lake Elementary School	505 Indian Lake Road	Hendersonville
Jack C Anderson Elementary	250 Shutes Lane	Hendersonville
Lakeside Park Elementary	204 Dolphus Drive	Hendersonville
Merrol Hyde High School	128 Township Dr.	Hendersonville
Nannie Berry Elementary School	138 Indian Lake Road	Hendersonville
Pope John Paul II High School	Caldwell Ln.	Hendersonville
Robert E Ellis Mid	100 Indian Lake Road	Hendersonville
T. W. Hunter Middle School	3140 Long Hollow Pk	Hendersonville
Walton Ferry Elementary School	732 Walton Ferry Road	Hendersonville
Wessington Place Elementary	140 Scotch St	Hendersonville
Millersville Elementary School	1248 Louisville Highway	Millersville
Rivergate Academy	(in old Millersville Elem. School)	Millersville
Clyde Riggs Elementary School	211 Fountain Head Road	Portland
Highland Academy	211 Highland Circle Drive	Portland
Highland Elementary School	234 Highland Circle Dr.	Portland
J W Wiseman Elementary	922 South Broadway	Portland
Portland High School	600 College St	Portland
Portland Middle School	604 South Broadway	Portland
Watt Hardison Elementary School	300 Gibson St	Portland
Westmoreland Elementary School	3012 Thompson Lane	Westmoreland
Westmoreland High School	4300 Hawkins Dr.	Westmoreland
Westmoreland Middle School	4128 Hawkins Drive	Westmoreland
Christian Community H.S.	506 Hester Lane	White House
Harold B. Williams Elementary	115 South Palmer's Chapel Rd	White House
Heritage and Hope Academy	506 Hester Lane	White House
Robert F. Woodall Primary	300 Eden Way	White House
White House Christian Academy	200 Spring St	White House
White House Freshman Annex	111 Meadows Rd	White House
White House High School	508 Tyree Springs Road	White House
White House Heritage High School	7744 Highway 76	White House
White House Middle School	2020 Highway 31-W	White House
White House Heritage Middle School	220 West Drive	White House
White House Christian Academy	Spring St.	White House
Christian Community High School	506 Hester Ln.	White House
Heritage & Hope Academy	506 Hester Ln.	White House

➤ OTHER IMPORTANT FACILITIES

Gallatin City Hall	132 W. Main St.	Gallatin
Gallatin Service Center	641 Long Hollow Pike	Gallatin
Sumner County Administration Building	Belvedere Dr.	Gallatin
City Hall Annex-Detective & Codes		Goodlettsville
Delmas Long Community Cntr		Goodlettsville
Goodlettsville City Hall	105 South Main Street	Goodlettsville
Goodlettsville Library	N. Main St	Goodlettsville
Goodlettsville Post Office	Northcreek Blvd	Goodlettsville
Goodlettsville Public Works	215 Cartwright Street	Goodlettsville
Moss Wright Maintenance Bldg	775 Caldwell Dr	Goodlettsville
Pleasant Green Pool Bldg	Pleasant Green Dr	Goodlettsville
Tornado Warning Siren @ Delmas Long Community Cntr		Goodlettsville
Rivergate Mall	1001 Rivergate Pkwy.	Goodlettsville
Madison Creek Pump Station	2040 Crencor Drive	Goodlettsville
Metro Pump Station	324 E. Cedar St	Goodlettsville
Wynlands Pump Station	113 Wynlands Circle	Goodlettsville
Crestview Apts	100 Lewis Drive	Millersville
Millersville City Hall	1246A Louisville Hwy	Millersville
Millersville Comm. Center	1181 Louisville Hwy	Millersville
Court Building	124 Main St.	Portland
Mechanic's Building	130 Morningside Dr.	Portland
Parks Dept	701 South Broadway	Portland
Portland City Hall	100 South Russell	Portland
Public Safety Building	433 North Broadway	Portland
Westmoreland Town Hall	1001 Park St.	Westmoreland
White House City Hall	105 College St	White House
White House Waste Water Dept	725 Industrial Drive	White House
White House Public Works	427 Industrial Drive	White House
White House Utility District	3303 Highway 31-W	White House

# Appendix G

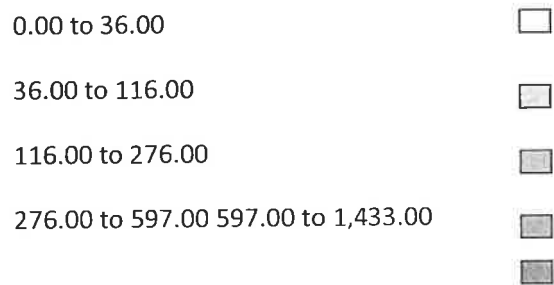
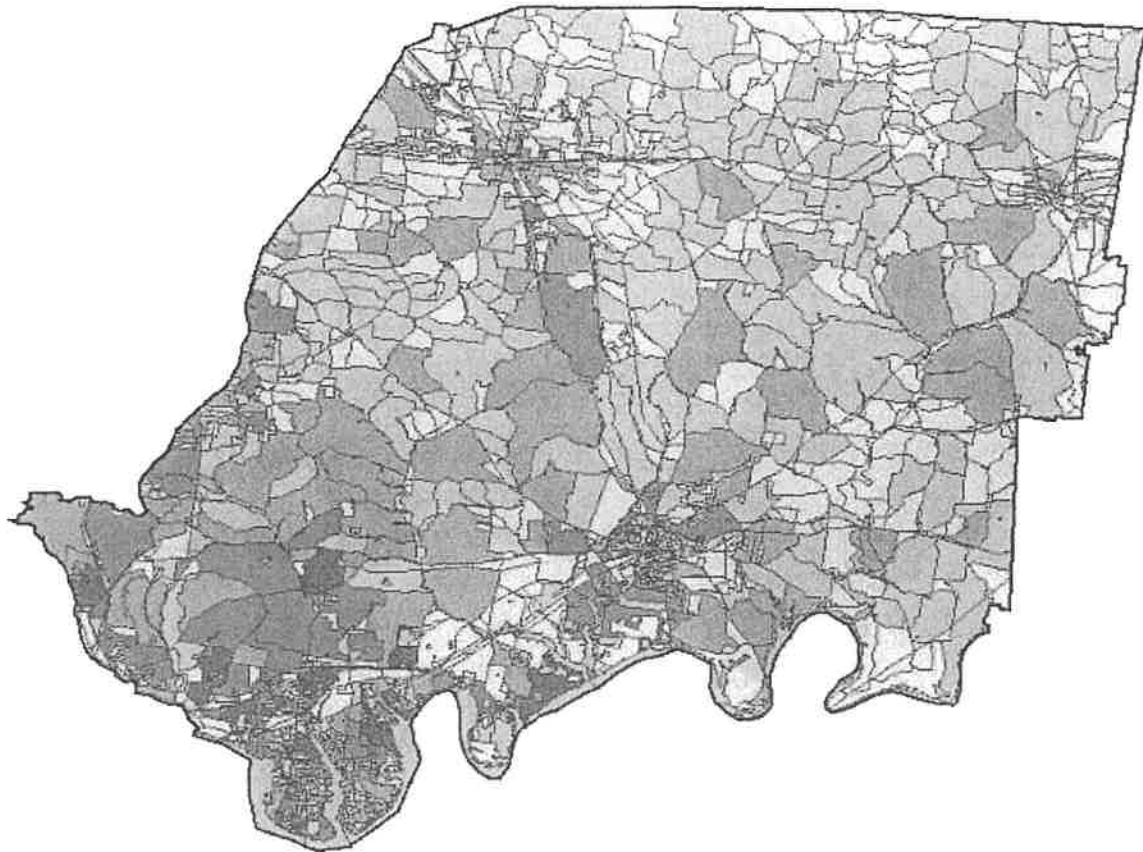
## G: Other Maps

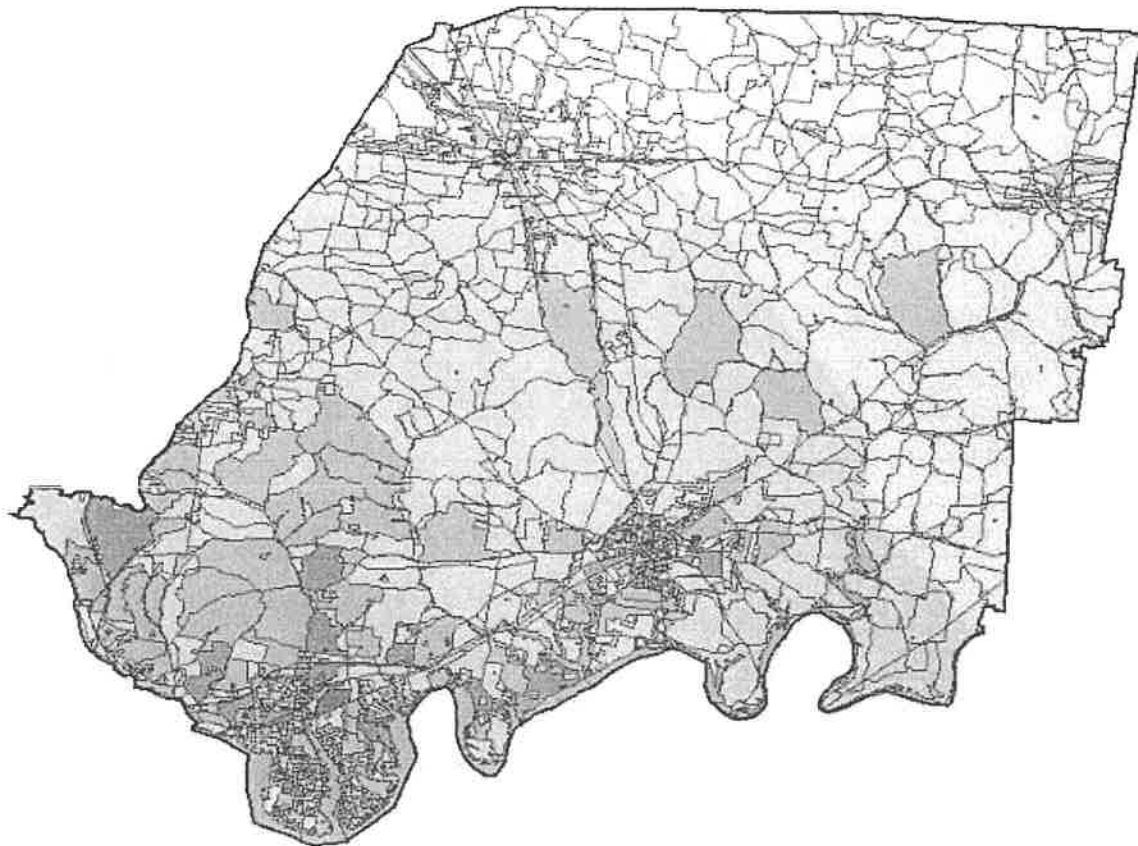
Sumner County Nighttime Residents Sumner County Daytime Vehicles Sumner County Nighttime

Vehicles Sumner County Identified Bridges

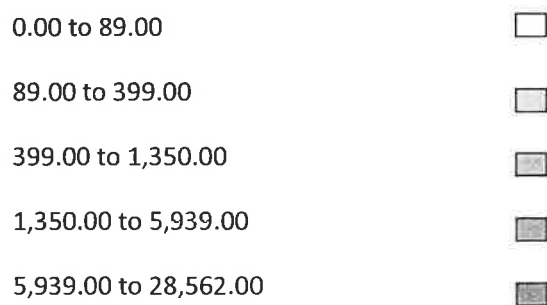
Sumner County and the Nashville Metropolitan Area Sumner County Zoning

## Sumner County Nighttime Residents

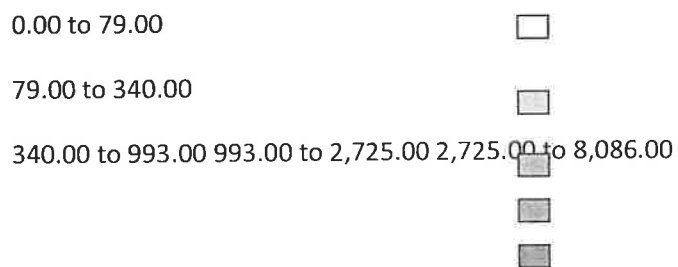
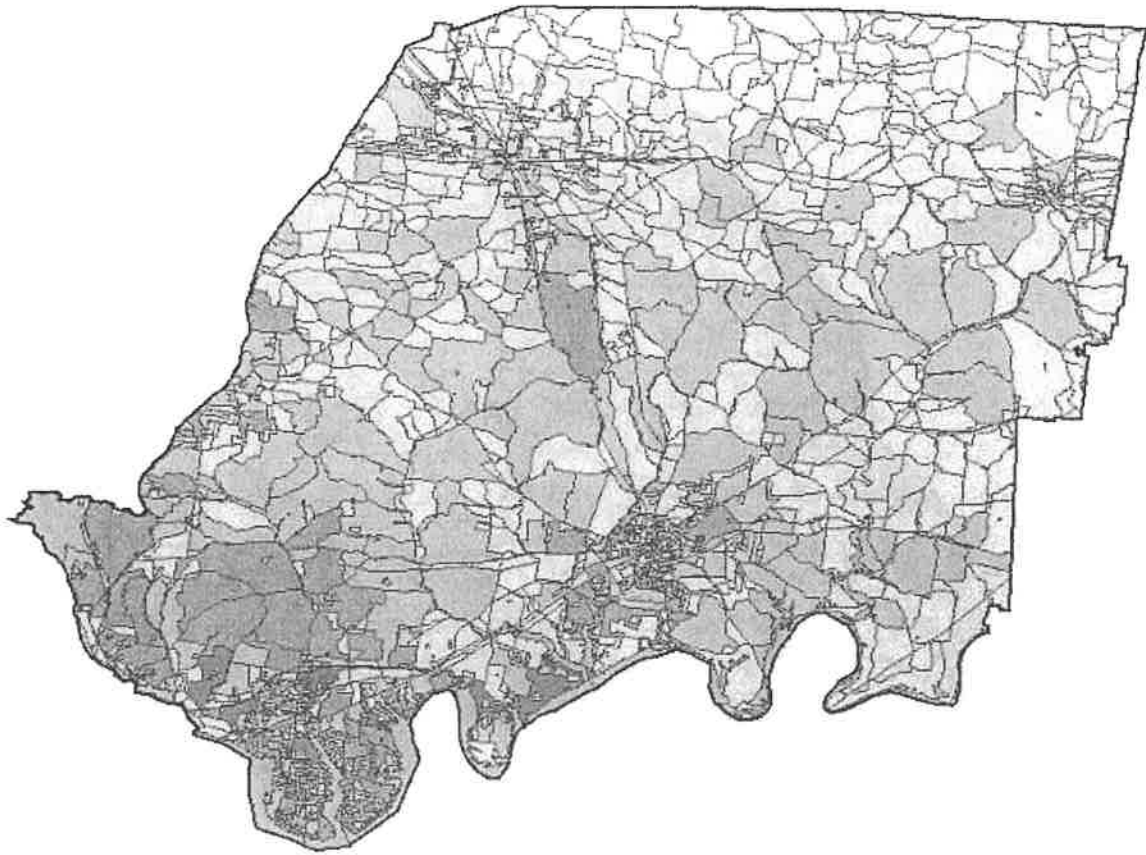




### Sumner County Daytime Vehicles



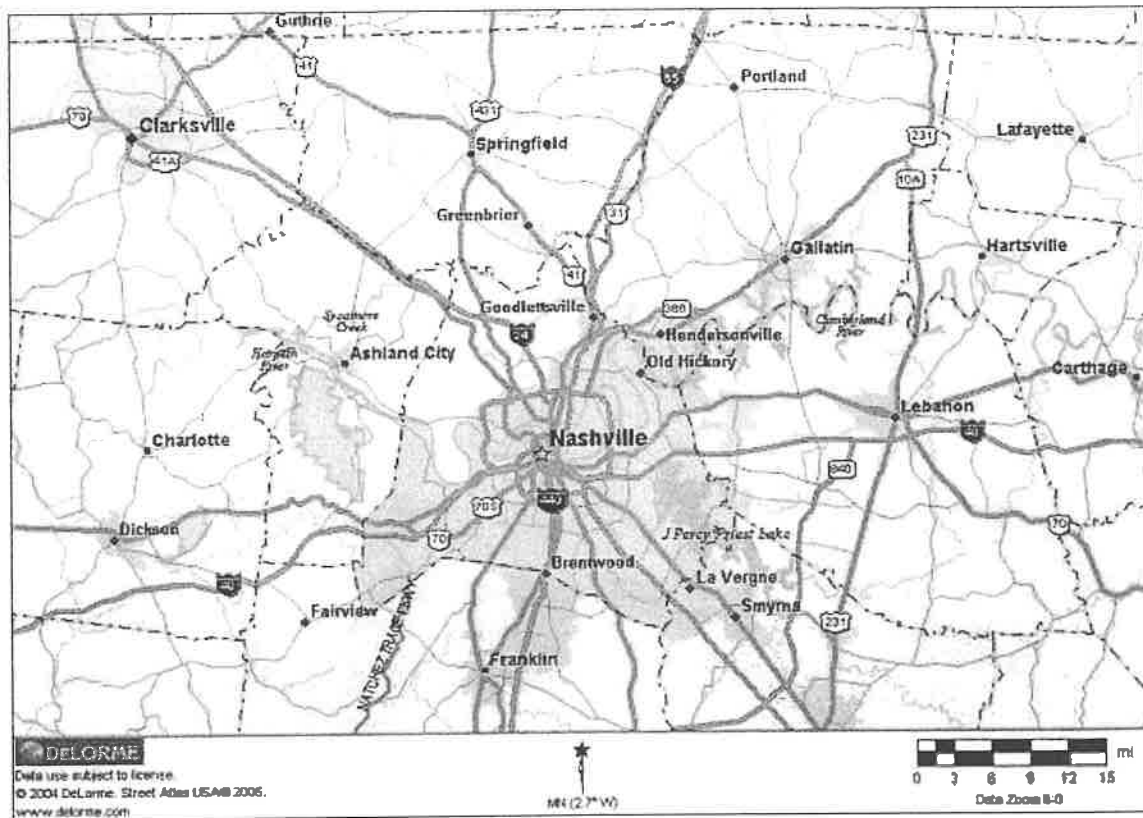
## Sumner County Nighttime Vehicles

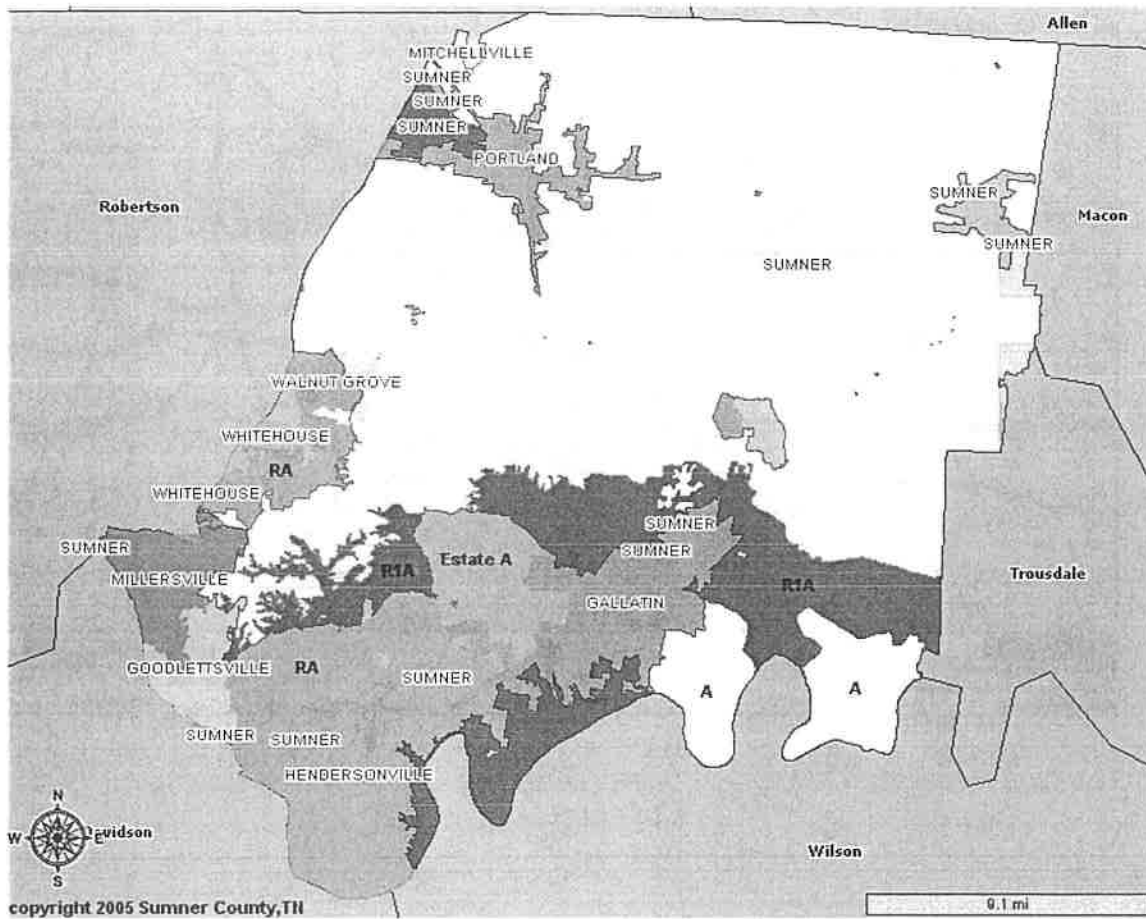


## Sumner County Identified Bridges



## Sumner County and the Nashville Metropolitan Area





#### CLASSIFICATIONS:

- **Residential A (Rural):** Provides a low-density residential environment having good access to public water, schools and other community facilities, but well separated from heavy traffic and other incompatible activities.
- **Residential B (Suburban):** Provides a medium density residential environment having good access to public water, schools, sewerage and other community services, but well separated from heavy traffic and other incompatible activities.
- **Residential R1A (General Residential):** Provides a low-density residential environment for all types of housing units having good access to public water, schools and other community facilities, but well separated from activities incompatible with residential.
- **Residential Planned Unit Development (RPUD):** Promotes flexibility in design and permits planned diversification in the location of structures; promotes efficient use of land that will facilitate a more economic arrangement of buildings, circulation systems, land use, and utilities; preserves as much as possible existing landscape features and utilizes them in a harmonious fashion; encourages the total planning of tracts of land; provides a mechanism for the ownership of land, utilities, streets and facilities in common as well as the maintenance and disposition thereof.
- **Estate A:** Provides a very low-density residential environment characterized by open country and large lots where intense public facilities are not required. (Minimum lot 80,000 sq. ft.)
- **Estate B:** Provides a very low-density residential environment characterized by open country and large lots where intense public facilities are not required. (Minimum lot 120,000 sq. ft.)

- **Commercial A (Highway):** Provides for major retail and service areas at locations of superior accessibility on thoroughfares of width and design capable of safely handling the large volumes and turning movements of traffic associated with these commercial facilities.
- **Commercial B (Local):** Provides for certain frequently needed basic household commercial services at locations convenient to residential areas, without altering their residential character. Secondly, to eliminate lengthy trips for everyday needs to major shopping areas, and so reduce traffic at these locations.
- **Commercial C (Planned Shopping):** Provides for a unified development, in one or more buildings, of retail shops, stores and offices that provide for the regular needs and convenience of the people residing in the market area of the center.
- **Commercial 1:** Provides for certain frequently needed basic household commercial services at locations convenient to residential areas.
- **Commercial 2:** Provides for major retail and service areas at locations of superior accessibility on thoroughfares of width and design capable of safely handling the large volumes and turning movements of traffic.
- **Commercial 3:** Provides for a unified grouping of commercial buildings which do not require or desire a central business district location.
- **Commercial 4:** Provides for a unified development, in on or more buildings, of professional office services, medical services , as well as financial, insurance, real estate and similar services. Multi-family housing may also be included. This district may serve as a transition from residential to commercial or industrial districts.
- **Industrial:** Provides for industrial uses which are as nearly compatible as possible with nearby properties in agricultural, residential or commercial use.

- **Agricultural:** Provides lands suited for the growing of crops, animal husbandry, dairying, forestry and similar agricultural uses, and provides for adequate regulation on non-agricultural uses such as low-density, rural, non-farm residential developments and commercial uses designed to provide necessary services for the surrounding areas.
- **Floodplain District:** These areas are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief and impairment of the tax base, all of which adversely affects the public health, safety and welfare.

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# Appendix H

## **H: Adoption Resolutions**

**Note:** Resolutions will on file.

**MINUTES  
LEGISLATIVE COMMITTEE  
JEREMY MANSFIELD, CHAIRMAN  
NOVEMBER 13, 2023**

**Present:**

Jeremy Mansfield, Chairman  
David Klein, Vice-Chairman  
Robert B. Brown III  
Matthew Shoaf  
Jamie Teachenor

**Also Present:**

John C. Isbell, County Mayor  
Steve Weiner, Staff Attorney  
Jennifer Mitchell, minute taker

**Absent:**

Darrell Rogers  
Merrol N. Hyde, Commission Chairman

Chairman Mansfield brought the regular scheduled Legislative Committee meeting to order with an invocation by Commissioner Klein on Monday, November 13, 2023, at 5:30 p.m. Chairman Mansfield declared a quorum present to conduct business.

3. Approval of Agenda.

Comm. Shoaf moved, seconded by Comm. Teachenor, to approve the agenda. The motion carried unanimously.

4. Approval of minutes of October 16, 2023. Upon motion of Comm. Teachenor, seconded by Comm. Brown, the Committee voted unanimously to approve the minutes of October 16, 2023.

5. Recognition of the Public.

Kevin Baigert of 424 AB Wade Road, Portland spoke to item 8a and stated who is responsible for capital improvements was omitted and asked why in library business. He expressed his support for items 8b and 8c.

Pam Nolen of 199 Nolen Circle, Cottontown spoke to item 9b and the flooding on Bugg Hollow and dredging and cleaning out the creek.

6. Report of the Chairman. No report

7. Report of County Mayor. No report

## 8. Old Business.

- a. Discussion – Resolution 1504-02 clarifying Ownership, Routine Maintenance, Support Service, and Funding for the Hendersonville Library.

Chairman Mansfield moved, seconded by Comm. Klein, to discuss. The motion carried unanimously.

Chairman Mansfield reported the Mayor of Hendersonville directed the Finance Committee work with the County to resolve.

Chairman Mansfield moved, seconded by Comm. Teachenor, to direct Chairman Mansfield and Law Director Eric Sitler meet with the Hendersonville Finance Committee to clarify understanding. The motion carried unanimously.

- b. Resolution – Grant Review – VETO OVERRIDE.

Chairman Mansfield moved, seconded by Comm. Brown, to approve and forward to Financial Management.

Chairman Mansfield stated this action would bring the county into compliance with the 2012 Financial Management Act.

After discussion, Comm. Shoaf moved, seconded by Chairman Mansfield, to call for question. The motion to call for question failed to carry (3-2-0). Commissioners Klein and Teachenor voted against.

After further discussion, the Committee voted unanimously to approve and forward to Financial Management.

- c. Request for Procedural Requirement for Cast Vote Records Request.

Without objection, Chairman Mansfield requested to keep on old business for next month.

## 9. New Business.

- a. Veterans' Service Report and Presentation.

Jeff Oakey, Veteran Services Director gave a brief overview of office activity.

- b. Hazard Mitigation Plan Resolution.

Comm. Shoaf moved, seconded by Comm. Teachenor, to discuss. The motion carried unanimously.

Comm. Shoaf moved, seconded by Comm. Klein, to suspend the rules to allow EMA Director Ken Weidner to answer questions. The motion carried unanimously.

During discussion, Mr. Weidner explained without an approved resolution there is no approved plan, and the previous plan has expired.

Chairman Mansfield brought the meeting back in session.

Comm. Shoaf moved, seconded by Comm. Teachenor, to approve and forward to full Commission. The motion carried unanimously.

c. Resource Authority Agreement.

Comm. Shoaf moved, seconded by Comm. Klein, to defer until Attorney General opinion is issued. The motion carried unanimously.

d. Reappointment of Judicial Magistrates.

Comm. Shoaf moved, seconded by Comm. Teachenor, to approve and forward to full Commission. The motion carried unanimously.

10. Commission Recognition.

a. Station Camp High School Girls Soccer Team – State Champions

Comm. Shoaf moved, seconded by Comm. Teachenor, to approve and forward to full Commission. The motion carried unanimously.

11. Zoning.

12. Adjournment. Chairman Mansfield declared the meeting adjourned at 6:23 p.m. upon motion of Comm. Shoaf and seconded by Comm. Klein.

**RECOGNITION OF THE PUBLIC**  
**\*\*\*SPEAK ONLY TO ITEMS ON THE AGENDA\*\*\***

MEETING DATE: 11/13/23 LEGISLATIVE

	NAME	COMPLETE ADDRESS & TELEPHONE #	AGENDA ITEM
1	KEVIN BAIGENT	424 AB WADE RD BURLINGTON	615 323-1776 8A,B,C
2	Pam Nolen	199 Nolen Cir	615-390-1565
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