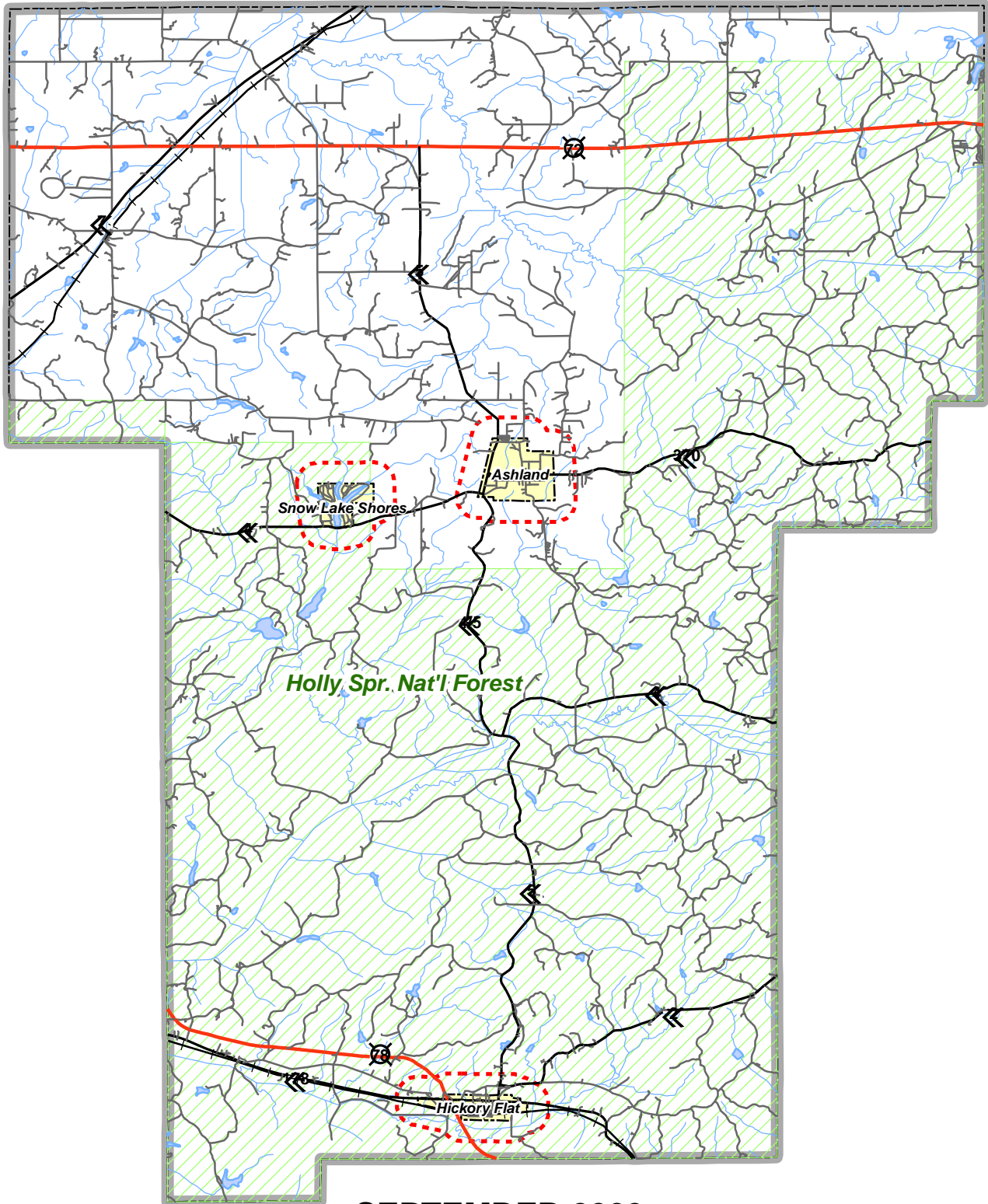


Benton County, Mississippi

County Wildfire Protection Plan



SEPTEMBER 2009

PREPARED BY NORTHEAST MISSISSIPPI PLANNING AND DEVELOPMENT DISTRICT
WITH FUNDING PROVIDED BY THE MISSISSIPPI FORESTRY COMMISSION

Table of Contents

1. Introduction

Overview
Steering Committee
Reviews and Comments

2. Area Description and Emergency Preparedness

Detailed Description
Local Preparedness and Firefighting Capability
Fire Stations

3. Mapping / Fire Cause Analysis

Maps – Include WUI on all maps

1. Base Map
2. Fires by FY 02-07
3. High Occurrence Wildfire Areas
4. Debris Burning Cause by FY 02-07
5. Incendiary Cause by FY 02-07
6. Fires by Fire Response Areas, FY 02-07
7. Risk Assessment Rating of Critical Facilities

Charts

1. Fires By Cause, FY 02-07
2. Debris Burning and Incendiary by Day of Week, FY 02-07
3. Debris Burning and Incendiary by Month, FY 02-07
4. Fires by Day of Month, FY 02-07
5. Fires by Month, FY 02-07
6. Fires by Hour of Day, FY 02-07
7. Fires by Day of Week, FY 02-07
8. Fires by Fiscal Year, FY 02-07

4. County Risk Assessment

At Risk Facilities
Rate Assessment: Low (Blue); Medium (Green); Medium-High (Yellow); High (Red)
Fuel Hazards
At Risk Facilities in High Wildfire Occurrence Areas

5. Strategic Goals

Goals established by Steering Committee

6. Mitigation Projects and Recommendations

Prioritized fuel treatment projects and preferred treatment methods
Recommendations to reduce ignitability of homes, community values, and critical facilities

7. Action Plan and Assessment Strategy

List actions that will address mitigation projects
Identify roles and responsibilities
List funding needs and sources
Establish timetables

8. Potential Funding Sources

List Funding Sources, including local, state, federal, nonprofit, and private sources

9. References

Identify sources used to complete the plan

10. Project Contact Information

List the Steering Committee Members

Introduction

In December of 2007, the Mississippi Forestry Commission and the Mississippi Association of Planning and Development Districts met to discuss the measures to be taken to complete a County Wildfire Protection Plan, beginning with twelve counties, and eventually including every county in the State. The plan addresses changes to the Wildland-Urban Interface (WUI) brought about by increased industrial and/or residential development in each County within the past several years.

The Wildland-Urban Interface (WUI) is described as the area where undeveloped wildland or vegetative fuels blend with structures or other human development. This area poses a tremendous risk to communities, and can create a deadly and complicated situation for firefighters. In a positive effort to focus on this hazardous situation, Benton County has agreed to create a County Wildfire Protection Plan (CWPP). A CWPP can lessen the possibility for loss in the event of a wildfire by identifying the main concern for the protection of life, property, and critical infrastructure within the WUI.

In January 2009, NEMPDD staff began compiling census records, fire information, geographical data, etc. The next step was to meet with the Benton County Fire Coordinator to obtain information about the Fire Departments throughout the County, and to gather input on the high and low points in their efforts to fight wildfires. Shortly after, a Steering Committee was formed with the cooperation of local, state, and federal agencies, and other interested parties. The Steering Committee included the Mississippi Forestry Commission, the Natural Resources Conservation Service, the Benton County Emergency Management Agency, and the Benton County Fire Coordinator with cooperation from all Fire Departments.

Public participation was encouraged by the Steering Committee to help produce a County Wildfire Protection Plan. The Plan includes several factors: Geographic Information System produced maps, a County Risk Assessment, a Mitigation Projects List, Structure Ignitability Recommendations, and an Action Plan and Assessment Strategy. It is the Committee's intent that this plan will educate landowners, and guide development for the community leaders and stakeholders. The Steering Committee's goal is that this Plan be utilized in the future development of Benton County, whether industrial or residential; and that all at-risk wildfire areas in the County be focused upon and treated.

This Plan was developed with an effort toward consistency with Title I of the Healthy Forests Restoration Act (HFRA) of 2003, the Comprehensive Emergency Management Plan (CEMP), and Benton County's Hazard Mitigation Plan.

Area Description

Benton County is located in the northern part of Mississippi, bordering the Mississippi-Tennessee State Line to the north, Marshall County to the west, Union County to the south, and Tippah County to the east. Ashland is the largest incorporated city in Benton County, and serves as the County Seat. Other incorporated areas include Hickory Flat and Snow Lake Shores. Unincorporated communities include Canaan, Lamar, Michigan City, and Winborn.

There are 83,200 acres of the Holly Springs National Forest covering the eastern and southern half of Benton County, offering excellent hunting seasons, as well as other activities. Almost completely surrounded by the Holly Springs National Forest in the west central part of the County is the town of Snow Lake Shores. This private resort community of 300 residents has a police and fire department, a city water system, garbage pickup, and protective ordinances. Snow Lake Shores boasts being the only Firewise Community in the State of Mississippi. With the added benefit of maintaining its Firewise Certification, the community is receiving a Firewise Grant to purchase a wood chipper.

While there is no interstate route through Benton County, U.S. Highway 72 is an extremely high-traffic four-lane roadway and a major east-west artery, linking Huntsville, Alabama, and Memphis, Tennessee. U.S. Highway 78, also a four-lane roadway, connects the cities of Birmingham, Alabama, Tupelo, Mississippi, and Memphis, Tennessee. Other well-traveled two-lane highways are State Highways 2, 4, 5, and 370.

The population of Benton County in 2000 was 8,026, which was a -0.2% decrease from 1990 (pop. 8,046). The U.S. Census Bureau estimates that the population will show an increase of 0.1% for 2007. This percentage is somewhat below average for the other Counties in the State by 2.2 %. About 23.2 % of the population lives below the poverty level.

Benton County contains approximately 409 square miles, or about 260,000 acres. Woodland makes up 68% of the County, and grassland makes up about 32%. The remainder of the County is used to raise soybeans, corn, hay, and cattle.

Benton County gets an average rainfall of 57 inches per year. The average rainfall in the U.S. is 37 inches. Snowfall is 2.8 inches per year. The number of days with any measurable precipitation is 105. January has an average temperature of 29 degrees, and July averages about 91 degrees. The comfort index, which is based on humidity during the hot months, is a 30 out of 100, where higher is more comfortable. The U.S. average on the comfort index is 44.

Emergency Preparedness and Firefighting Capability

Benton County is divided into six fire response areas covering rural areas, as well as the incorporated areas. Each department's Primary Response Area is the municipality or community for which it is named. The average size of the response areas for each VFD is approximately 68 square miles. Fringe and unincorporated areas receive fire protection based on available manpower, resources, and mutual aid at the time of the fire. All of the fire departments, including those located in city or town limits, are manned by volunteers who receive no compensation for fire protection services. Paid positions for municipal firefighters will not likely transpire, unless those towns expand their corporate limits.

Emergency preparedness for each of the county volunteer fire departments was reviewed as a part of this planning process. Based on information provided by the fire coordinator, this assessment involved factors such as equipment availability, public protection classification, and manpower.

Mutual aid agreements are in place with Marshall, Tippah, and Union Counties in Mississippi. The fire departments, trucks, and equipment are each owned by their local governing authorities.

Fire Districts and Municipalities in the State of Mississippi receive a public protection classification through the Mississippi State Rating Bureau (MSRB). This classification is the basis for determining the fire insurance rating for each district. The Fire Districts within Benton County are listed below, with the corresponding MSRB classification.

Mississippi State Rating Bureau Public Protection Classification List

DISTRICT	CLASS
Abel's Store	10
Ashland *	8
Hickory Flat	8
NE Benton	10
N Benton	10
Snow Lake Shores	8

* County Seat, noted in all tables

In general, the departments are well-equipped and able to respond to the needs of the areas they serve. However, Steering Committee members did identify improvements that could be made to provide better service to the districts.

The Mississippi Forestry Commission and the Benton County Volunteer Fire departments have a high regard for the way each pulls together in times of wildfire emergencies. Nevertheless, it is recommended that biannual meetings be established to clarify the roles and responsibilities of each agency. These meetings would allow any other inter-agency concerns to be addressed, as well as provide training opportunities and project coordination.

The Forestry Service for Benton County is in need of a brush truck to use at small fires that are easy to get to and easy to put out. Acquisition and use of a small truck would be more cost-efficient, and would reduce use of the bigger truck. Also noted, were some communications problems due to radio frequencies.

Allowing the issuance of citations to citizens who fail to obtain permits for prescribed burns should help to reduce wildfires. Requiring a burn permit is not effective without some type of penalty to those who break the law.

Another wildfire deterrent in this highly wooded area of the State would be having a full-time fire investigator for the Northern Region. Committee members felt that having someone on staff would greatly reduce the number of out of control fires and arson fires.

Along with the wooded areas of Benton County that need the attention of firefighters are over 20,000 acres of kudzu that grow in the region. Homes, businesses, and other properties with close proximity to kudzu have an increased risk of wildfire danger. A fire prevention practice of kudzu control is badly needed in this County.

A program of recruitment and retention for volunteer firefighters is needed. A community outreach and awareness program may help address some of the manpower issues. The Benton County Fire Coordinator would like to start a youth education program for fire prevention and safety, or perhaps an apprentice firefighter program, with funding provided by the Mississippi Forestry Commission. While not allowed to fight fires, these youths may be able to gain training through department exercises. The youth would support by providing drinks, supplies, or other equipment that is needed on-site. Involvement in the program may lead to a career as a volunteer firefighter. With an extremely limited budget for the VFD's, the Coordinator asked if this program, or one similar, be funded by the MFC.

The limited budget has also put a strain on fuel consumption for the firefighters who respond to wildfires without the aid of the MFC. The Steering Committee discussed a reimbursement program for fuel, as well as some type of insurance for those volunteers who respond to wildfires, with funding being granted by the MFC.

Each Volunteer Fire Department has at least one piece of structural fire-fighting apparatus that is less than fifteen years old and is designed to suppress structure fires and remain on hard surfaces. (Note: Hickory Flat VFD's "newest" vehicle is a 14-year-old pumper.) Each one also has at least one piece of smaller fire-fighting apparatus that can be used to respond to small debris or trash fires located on firm level ground. A current listing of equipment and the location is provided below.

Benton County Fire District Equipment List

Department	Model Year	Type	Water Capacity (gallons)
Abel's Store Volunteer Fire Department	2008	Pumper / Tanker	2,500
	2001	Pumper	1,000
	1984	Brush Fire Truck (MFC)	200
	1979	Tanker (out of commission)	2,000
Ashland Fire Department *	2009	Tanker	3,000
	2001	Rescue Vehicle	N/A
	1997	Pumper	1,000
	1991	Brush Truck	250
	1986	Brush Truck	250
	1973	Pumper	500
Hickory Flat Volunteer Fire Department	1995	Pumper	1,000
	1992	Rescue Vehicle	N/A
	1977	Pumper	1,000
	1977	Brush Truck (MFC)	200
NE Benton Volunteer Fire Department	2001	Pumper	1,000
	1995	Tanker	2,000
	1979	Brush Truck	200
North Benton Volunteer Fire Department	1998	Pumper	1,000
	1976	Brush Truck (MFC)	110
Snow Lake Shores Volunteer Fire Department	2006	Pumper / Tanker	2,500
	2000	Brush Truck	250
	1996	Pumper	1,000
	1985	Tanker	2,000

The table below indicates the number of volunteer firefighters on record for each station, but the average VFD has about 19 active members. Also, the number of volunteers who respond fluctuates due to work schedules. The Fire Response Areas within the County, including Station Location(s), and Number of Volunteers, are listed below.

Benton County Fire Departments and Firefighters

Fire Response Area	Fire Department	Station Location(s)	Total Number of Firefighters
Abel's Store	Abel's Store VFD	Hwy 4 @ Hwy 370 Ashland, MS 38603	16
Ashland *	Ashland FD	368 Ashland Avenue, Ashland, MS 38603	20
Hickory Flat	Hickory Flat VFD	290 Maple Street, Hickory Flat, MS 38633	21
NE Benton	NE Benton VFD	Hwy 72 East, Ashland MS 38603	15
N Benton	North Benton VFD	Hwy 7 South, Ashland, MS 38603	27
Snow Lake Shores	Snow Lake Shores VFD	12 Snow Lake Drive, Snow Lake Shores, MS 38603	18

Mapping

The Benton County Wildfire Protection Plan contains seven maps created by the Northeast Mississippi Planning & Development District (NEMPDD) Geographic Information System (GIS) Department. These maps were generated for planning purposes to aid in the assessment of county wildfire occurrence and emergency preparedness. The maps of Benton County include the Base Map; Fires by Fiscal Year, FY 2002-2007; High Occurrence Wildfire Areas; Debris Burning Cause by FY 2002-2007; Incendiary Cause by FY 2002-2007; Fires by Fire Response Areas; FY 2002-2007; and Risk Assessment Rating of Critical Facilities.

The Benton County **Base Map** shows a detailed baseline of roadways, inhabited areas, infrastructure, areas of community importance, and a WUI designation of one-half mile. The Committee discussed specific risk factors and treatment projects to reduce the risk of wildfire in newly developed areas that have been constructed near woodland and pastureland.

In addition to the WUI, the Steering Committee identified several areas of critical facilities, including communication towers, elevated water towers, and electric substations. The Base Map is the focal point of county protection as identified for the CWPP.

The **Fires by Fiscal Year, FY 2002 – 2007 Map** shows all fires from all causes over a six-year span. Those causes include arson, campfire, debris burning, equipment use, lightning, and smoking. MFC data for Benton County shows a total of 40 fires in 2002, 33 fires in 2003, 59 fires in 2004, 54 fires in 2005, 104 fires in 2006, and 70 fires in 2007. When these data were mapped, specific geographic areas revealing a high occurrence of wildfire became apparent.

The **High Occurrence Wildfire Areas Map** shows areas based on a computer calculation used to determine density and distribution by comparing each fire occurrence to its surrounding neighbors. Interestingly, each of the five high occurrence areas border or are near the Benton County Line. Area One is geographically located in the northwestern corner of the County. Area Two is located in the northeastern portion. Area Three is located in the west central portion of the County, between the County Line and the Snow Lake Shores community. (Note: Within the Snow Lake Area itself, which is a Firewise Community, there have been no wildfires reported within this timeframe.) Area Four is located in the east central part of the County. Area Five has a small concentration of wildfires in the southeastern vicinity of the County. Areas Two, Three, Four, and Five include portions of the Holly Springs National Forest.

The **Debris Burning Cause by FY 2002-07** Map represents the number of wildfires in Benton County that were the results of persons disposing of dry leaves, tree clippings, or pine needles. The number of Debris Fires between 2002 and 2007 total 78.

The **Incendiary Cause by FY 2002-2007 Map** for Benton County exhibits the geographic distribution of these fires throughout the County. According to the Mississippi Forestry Commission wildfire data, there were a total of 223 arson fires between the years of 2002 – 2007. This would account for about 62% of the 360 wildfires reported during that period.

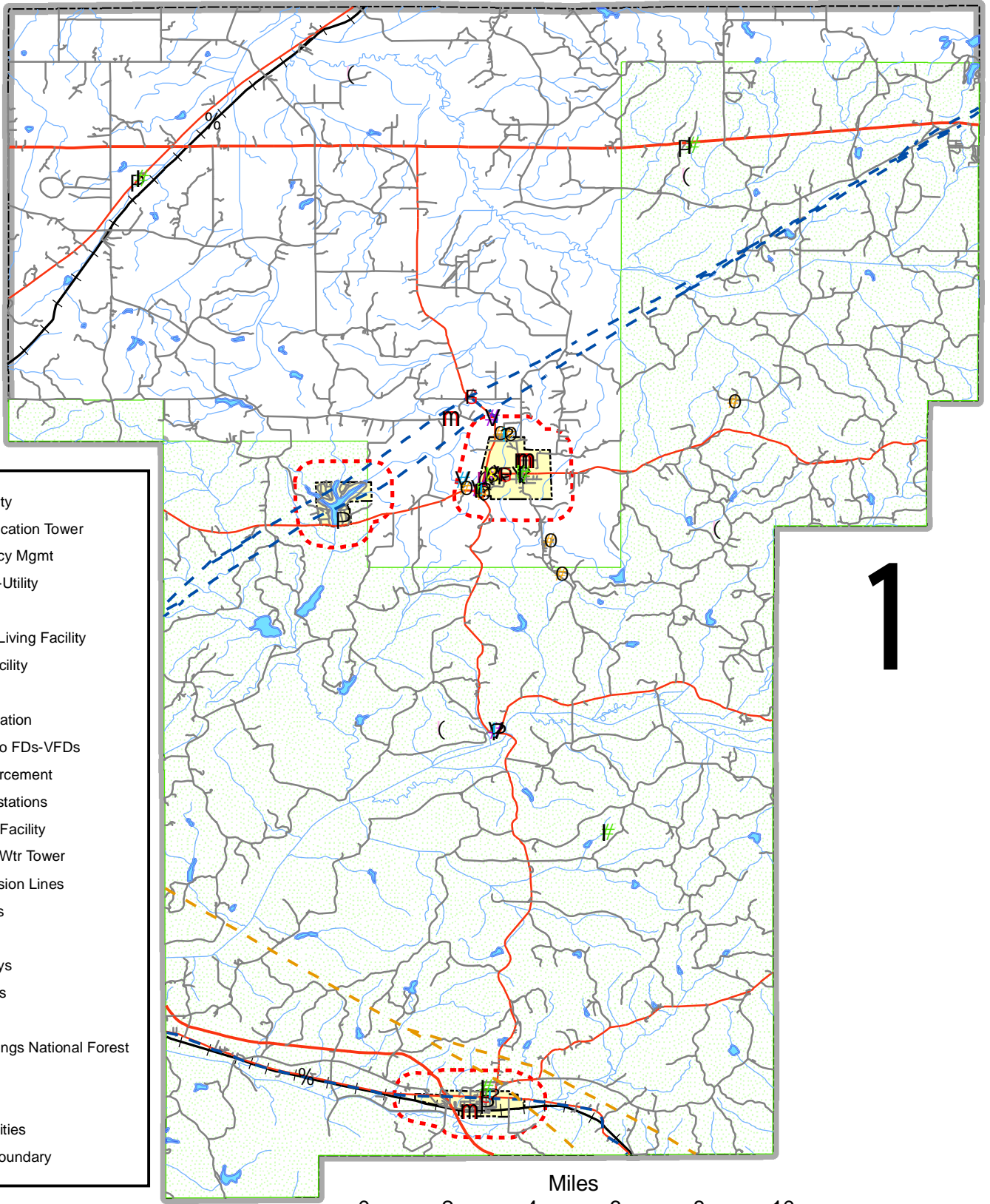
The **Fires by Fire Response Areas, FY 2002-2007 Map** presents all the wildfires from 2002 – 2007, as well as the fire district boundaries and the location of the fire departments within those districts. It also displays the county fire station response areas with respective boundaries, as well as each volunteer fire station location. The boundaries are considered in the term of “shared”, indicating that any fire department within a reasonable distance of a fire will respond and assist the primary station. This map will aid in the assessment of numbers of fires and their general location within each district.

The **Risk Assessment Rating of Critical Facilities Map** shows the results of how specific areas of concern in Benton County were rated by the Steering Committee. Included in those areas are roadways, municipalities, utilities, and locales of community importance found on the Base Map. The ratings for each of the attributes reflect whether they are at risk due to their purpose, the nearby fuel load, or the potential to cause a considerable impact in the event of their damage or loss due to a wildfire. These ratings were then displayed in map form to better enable review and assessment of the entire county.

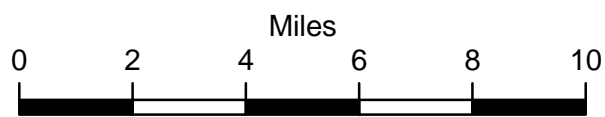
County Wildfire Protection Plan Maps

1. Benton County Base Map
2. Fires by Fiscal Year, FY 2002-07
3. High Occurrence Wildfire Areas
4. Debris Burning Cause by FY 2002-07
5. Incendiary Cause by FY 2002-07
6. Fires by Fire Response Areas, FY 2002-07
7. Risk Assessment Rating of Critical Facilities

Benton County, Mississippi County Wildfire Protection Plan Base Map



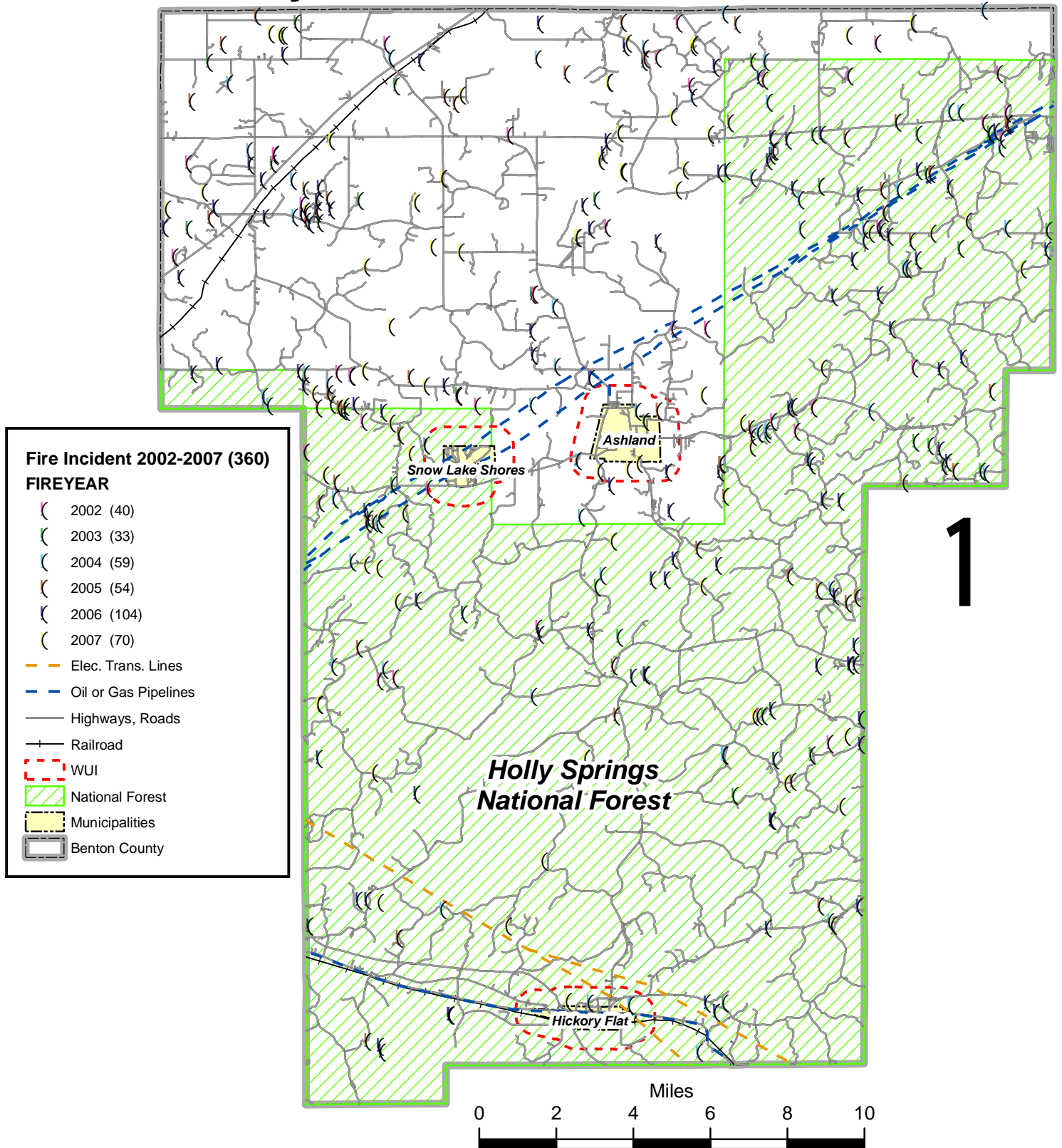
- (Community
- # Communication Tower
- 3 Emergency Mgmt
- ⊙ Industrial-Utility
- ⊞ Medical
- ⌋ Assisted Living Facility
- ⌋ Public Facility
- m Schools
- % Transportation
- P Benton Co FDs-VFDs
- \ Law Enforcement
- V Elec Substations
- V Oil - Gas Facility
- ? Elevated Wtr Tower
- - - Transmission Lines
- - - Gas Lines
- Roads
- State Hwys
- U.S. Hwys
- + Railroad
- ▨ Holly Springs National Forest
- ⋯ WUI
- ▭ Lakes
- ▭ Municipalities
- ▭ County Boundary



Benton County, Mississippi

County Wildfire Protection Plan

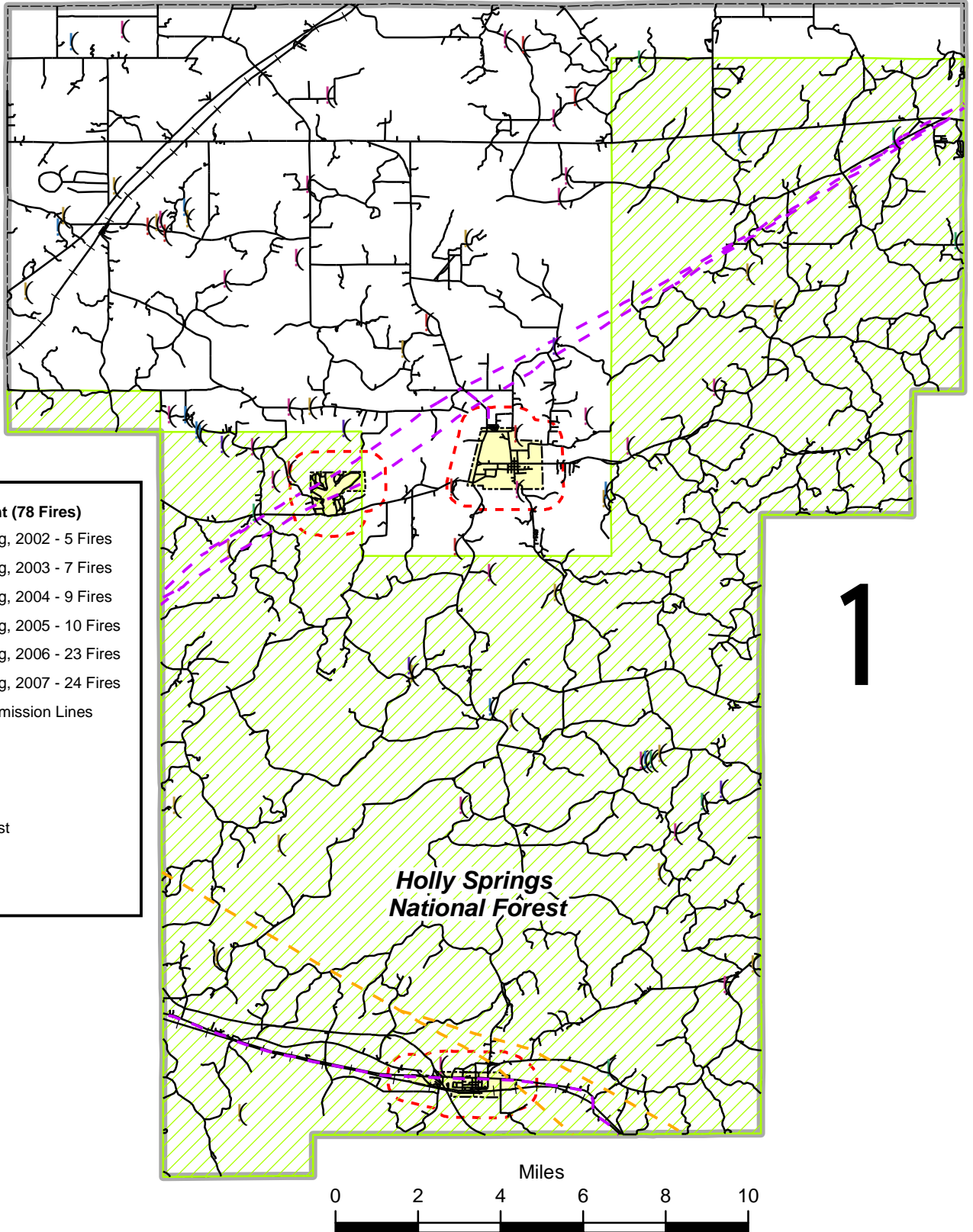
Fires by Fiscal Year, FY 2002 - 2007



Benton County, Mississippi

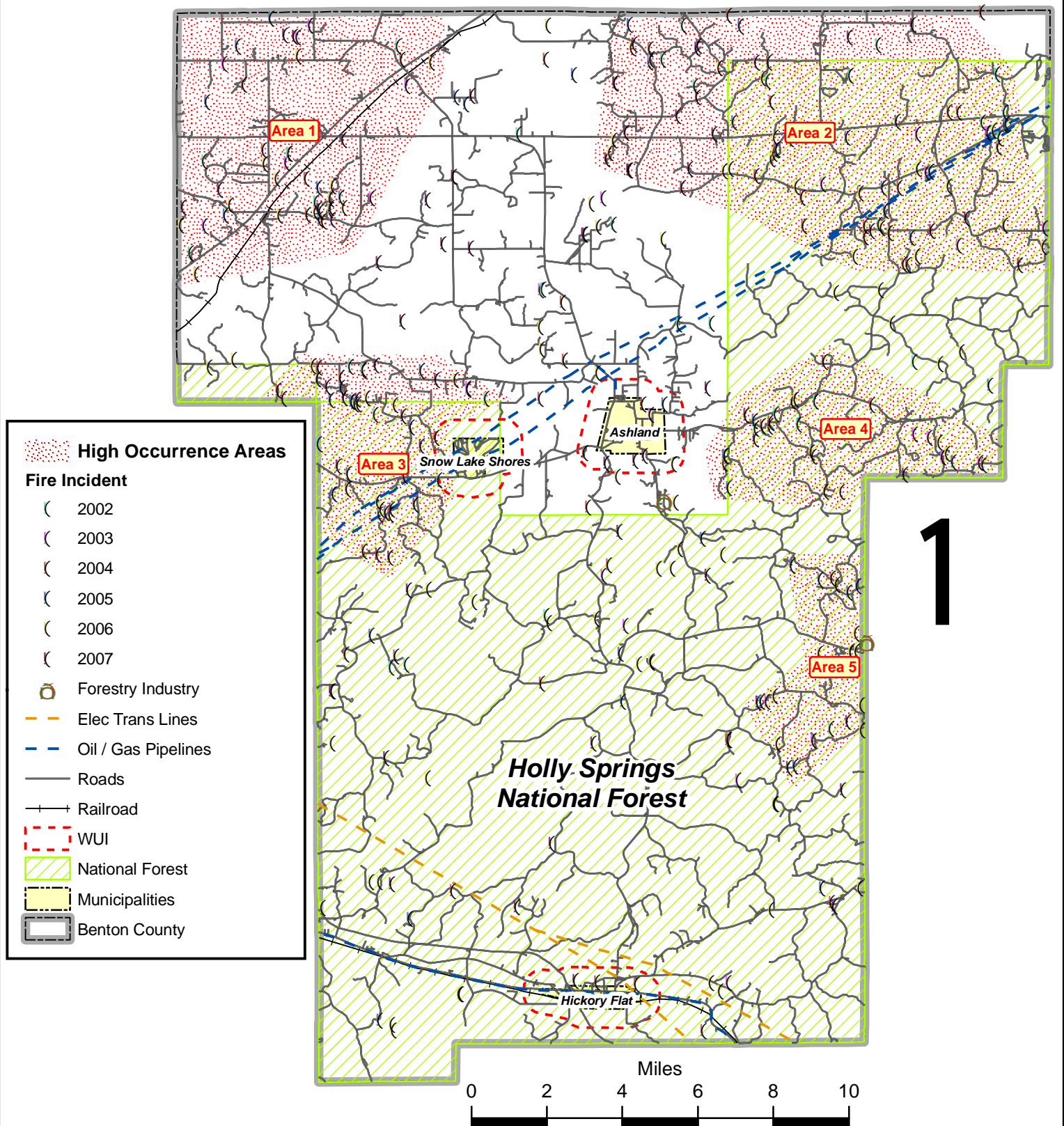
County Wildfire Protection Plan

Debris Burning Cause by FY 2002 - 2007



Benton County, Mississippi

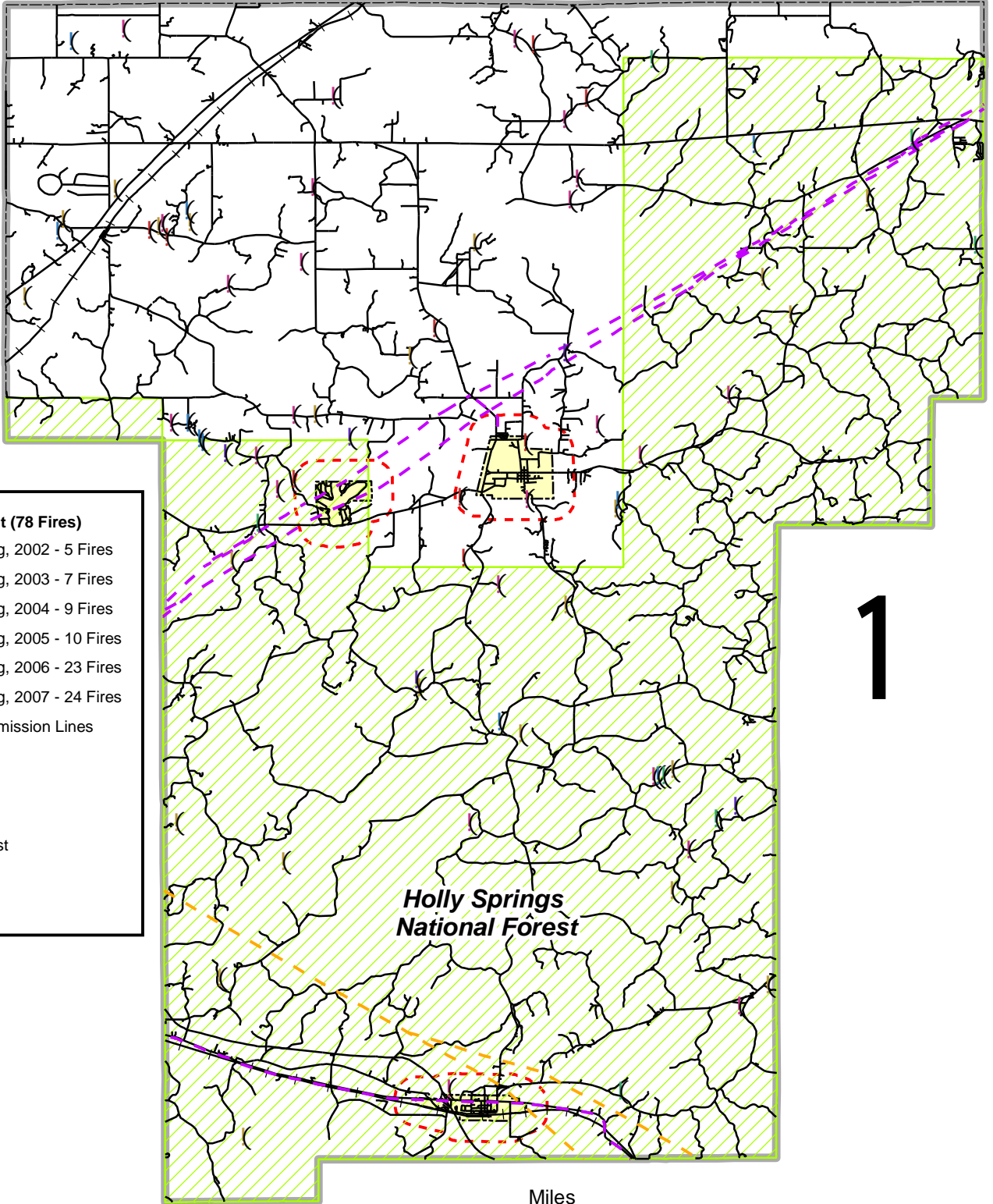
County Wildfire Protection Plan High Occurrence Wildfire Areas



Benton County, Mississippi

County Wildfire Protection Plan

Debris Burning Cause by FY 2002 - 2007

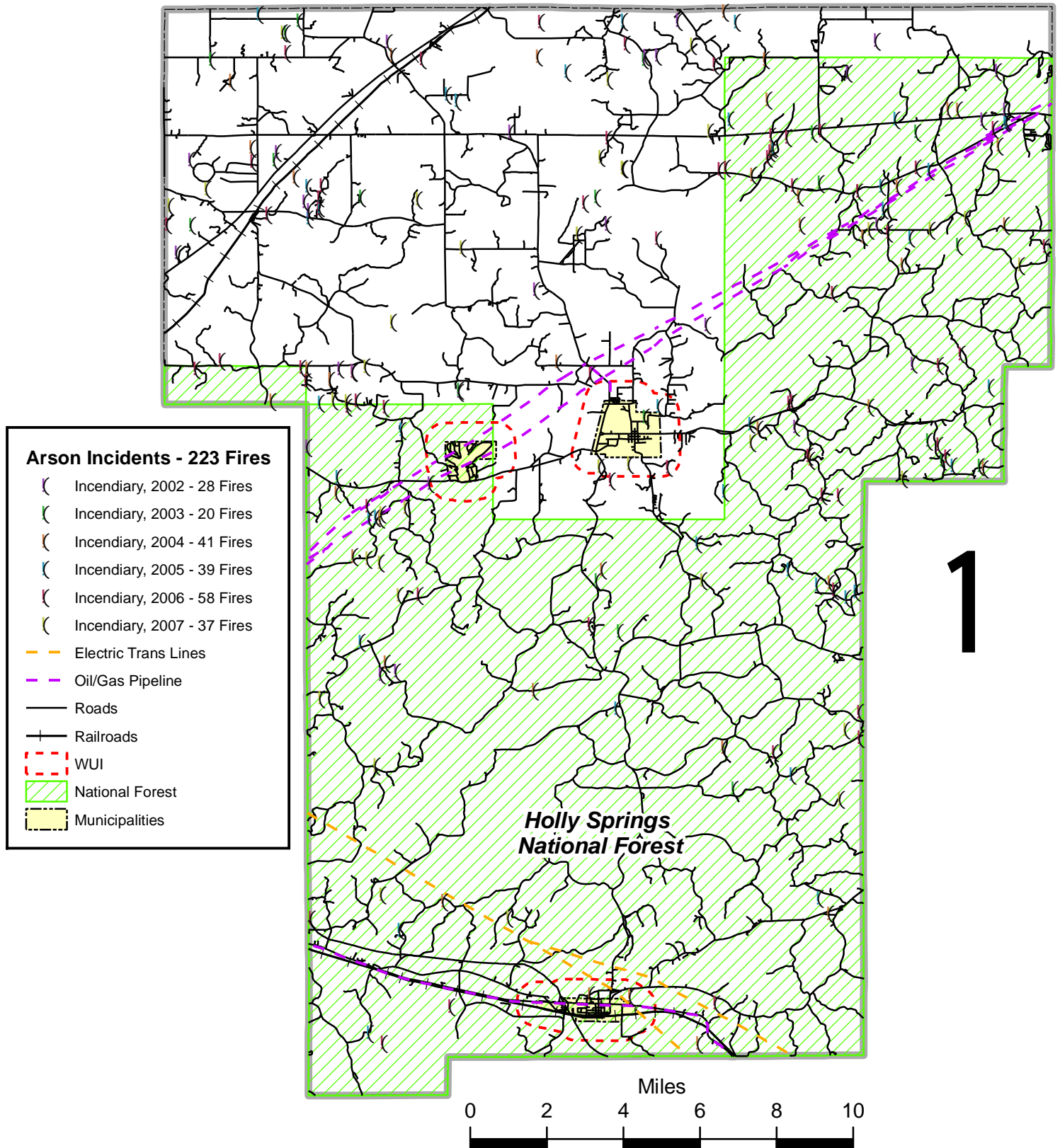


- Debris Burn Incident (78 Fires)**
- (Debris Burning, 2002 - 5 Fires
 - (Debris Burning, 2003 - 7 Fires
 - (Debris Burning, 2004 - 9 Fires
 - (Debris Burning, 2005 - 10 Fires
 - (Debris Burning, 2006 - 23 Fires
 - (Debris Burning, 2007 - 24 Fires
 - Electric Transmission Lines
 - Oil/Gas Lines
 - Roads
 - Railroads
 - ▨ National Forest
 - - - WUI
 - ▨ Municipalities

Benton County, Mississippi

County Wildfire Protection Plan

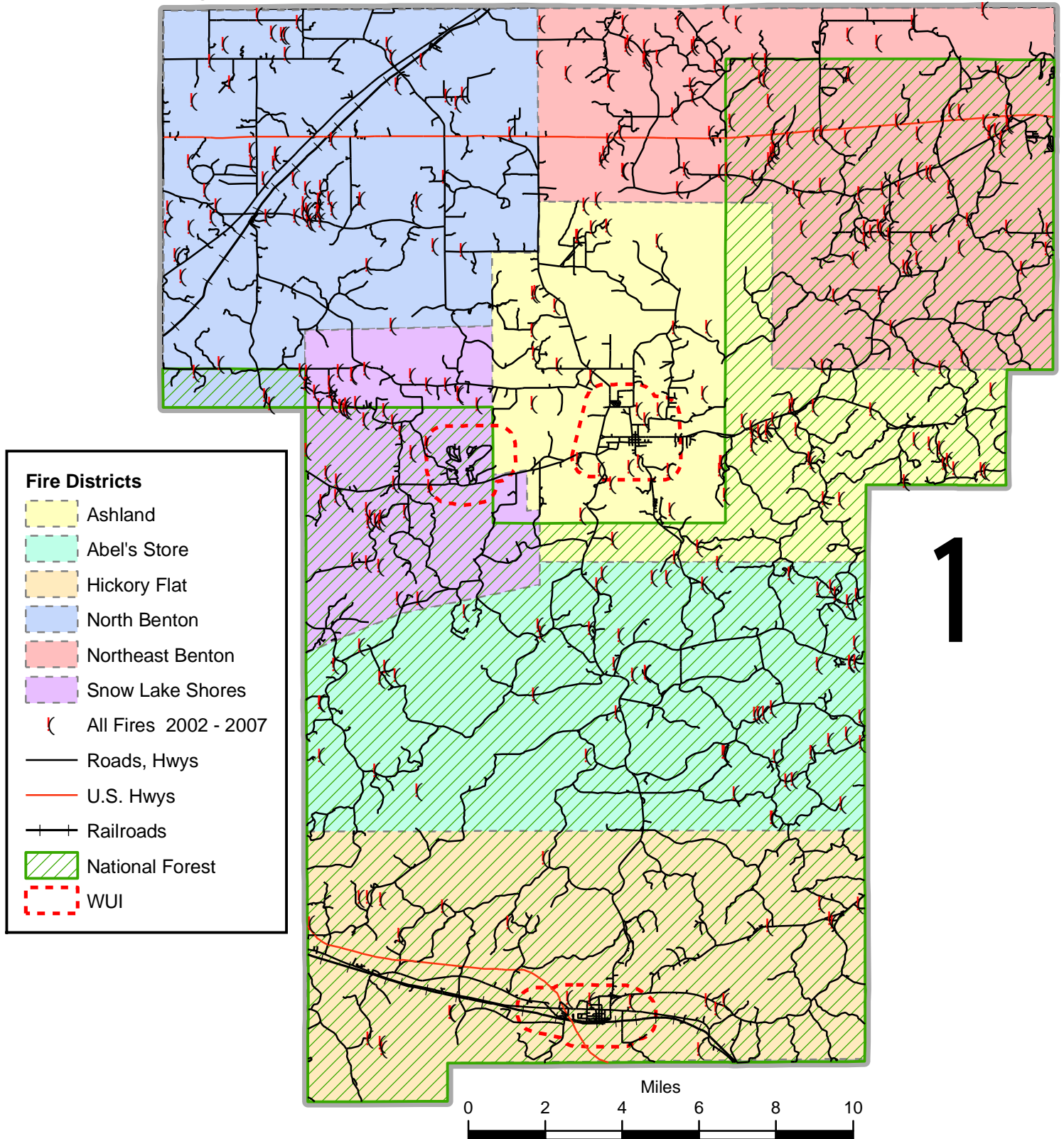
Incendiary (Arson) Cause by FY 2002 - 2007



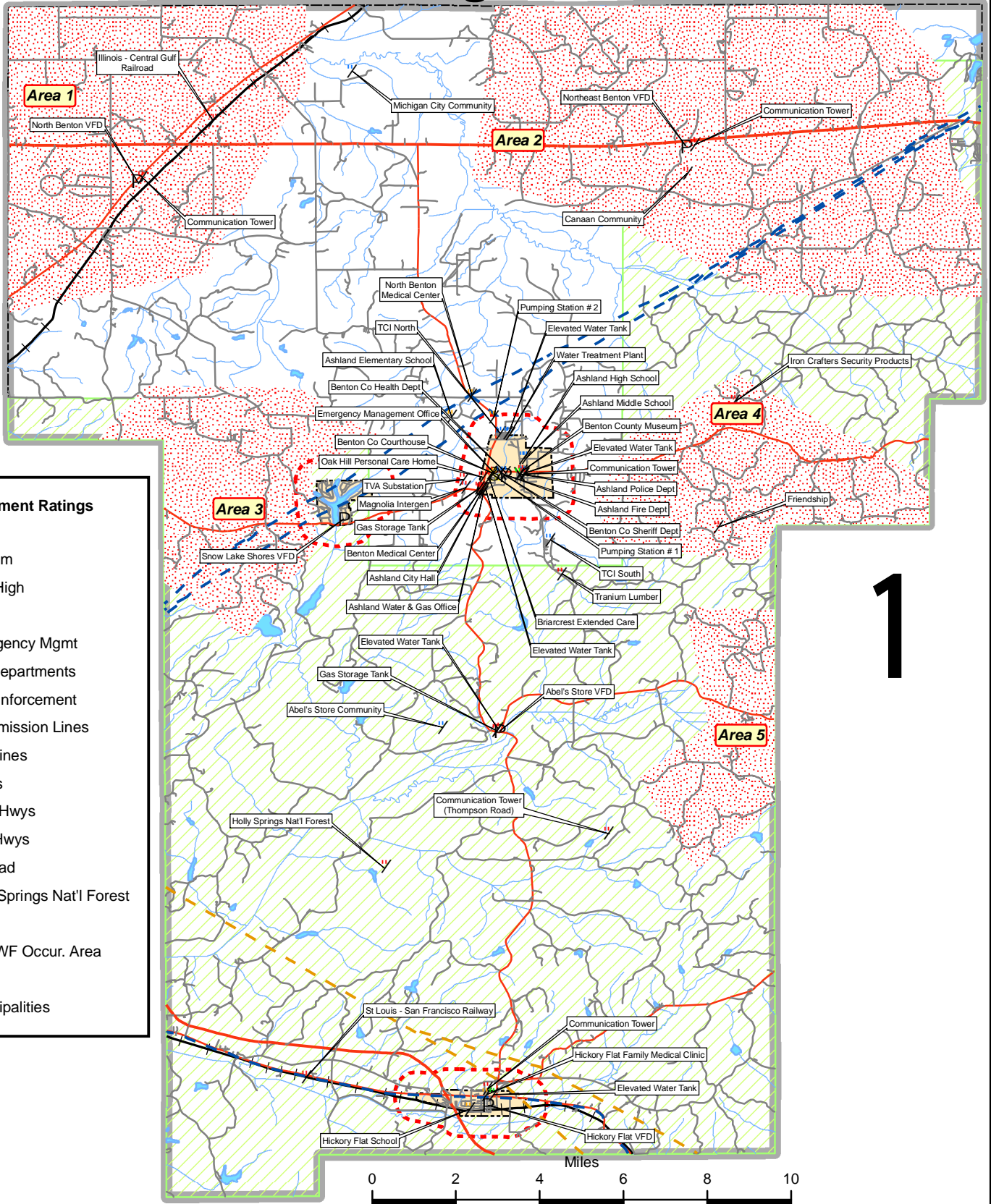
Benton County, Mississippi

County Wildfire Protection Plan

Fires by Fire Response Areas, FY 2002 - 2007



Benton County, Mississippi County Wildfire Protection Plan Risk Assessment Rating of Critical Facilities



Risk Assessment Ratings

- / Low
- / Medium
- / Med-High
- / High
- 3 Emergency Mgmt
- P Fire Departments
- \ Law Enforcement
- Transmission Lines
- Gas Lines
- Roads
- State Hwys
- U.S. Hwys
- Railroad
- Holly Springs Nat'l Forest
- WUI
- High WF Occur. Area
- Lakes
- Municipalities

1

Fire Cause Analysis

The data collected by the Mississippi Forestry Commission from the Fiscal Years of 2002-2007 has been analyzed for this project and is represented in various types of charts.

Through the evaluation of these charts, it has been shown that Benton County experienced 360 fires during the fiscal years of 2002 through 2007; with 2006 having the most fires recorded (104). Of the total number of fires, incendiary and debris burning were the major causes of fires. A breakdown shows there were 223 fires caused by incendiary, and 78 caused by debris burning.

The **Fires by Cause, FY 2002 – 2007 Chart** shows that Benton County experienced 27 No Cause, 1 Natural Cause, 78 Debris Burning Cause, 223 Incendiary Cause, 3 Equipment Use Cause, 9 Miscellaneous Cause, and 19 Re-ignition Cause Fires within this time period.

The **Debris Burning and Incendiary by Day of Week, FY 2002 - 2007 Chart** shows that the weekends had the most incendiary fires, with 48 Saturday fires and 47 Sunday fires. The majority of the debris burning fires occurred on Tuesdays, with a total of 17 fires taking place during the same time frame.

The **Debris Burning and Incendiary by Month, FY 2002 - 2007 Chart** indicates that the most “popular” month for incendiary fires happened in the month of March with a total number of 106. March also proved exceptional for debris burning with a total of 29 fires between 2002 and 2007.

The **Fires by Day of Month, FY 2002 - 2007 Chart**, conveyed as a pie chart, shows that 36% of all fires within this time period occurred during the first and tenth of each month, totaling 129 fires. 120 fires (33%) occurred between the 21st and 31st; and 111 fires (31%) occurred from the 11th through the 20th.

The **Fires by Month, FY 2002 - 2007 Chart** gives a report in quarterly terms with the January through March leading the number of fires with 212, or 59%. Following are April through June, with 71 fires (20%); October through December, 47 fires (13%); and July through September, 30 fires (8%).

The **Fires by Hour of Day, FY 2002 - 2007 Chart** shows fires that occurred within a three-hour time period. Twelve Noon through 2:59 p.m. leads the way with 131 fires. 3:00 p.m. through 5:59 p.m. experienced 123 fires. 6:00 p.m. through 8:59 p.m. had 51 fires; 9:00 a.m. through 11:59 a.m. – 22 fires; 9:00 p.m. through 11:59 p.m. – 19 fires; 6:00 a.m. through 8:59 a.m. – 6 fires; and Midnight through 2:59 a.m. and 3:00 a.m. through 5:59 a.m., each had 4.

The **Fires by Day of the Week, FY 2002 – 2007 Chart** indicates that the majority of wildfires were reported on a Sunday, with 73 fires; and the second most reported number of fires was on Saturday, with 69 fires in this time period. Following on this list are Friday, with 53; Wednesday, with 44; Tuesday and Thursday, each with 42; and Monday, with 37.

The **Fires by Fiscal Year, FY 2002 – 2007 Chart** reveals that 2006 had the most wildfires with 104 reported during this period. The years following, in order of highest number of reports: 2007, with 70 fires; 2004, with 59 fires; 2005, with 54 fires; 2002, with 40 fires; and 2003, with 33 fires.

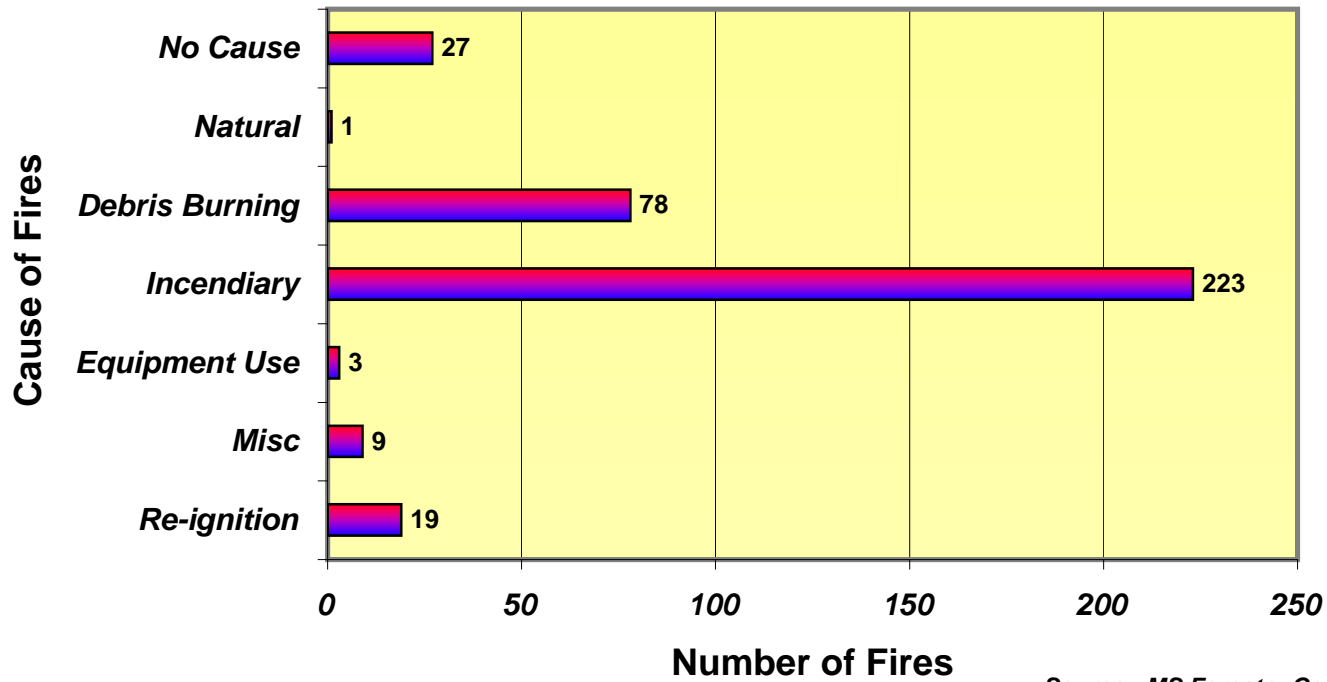
Conclusion

This Fire Cause Analysis Plan uses visual representation and analysis to turn the data that has been collected by the Mississippi Forestry Commission into comprehensive information for determining where wildfires are more likely to occur, as well as the most probable time of year, and day. The knowledge gained by this study will provide a means for the Mississippi Forestry Commission to use their resources to their greatest advantage.

Fire Cause Analysis Charts

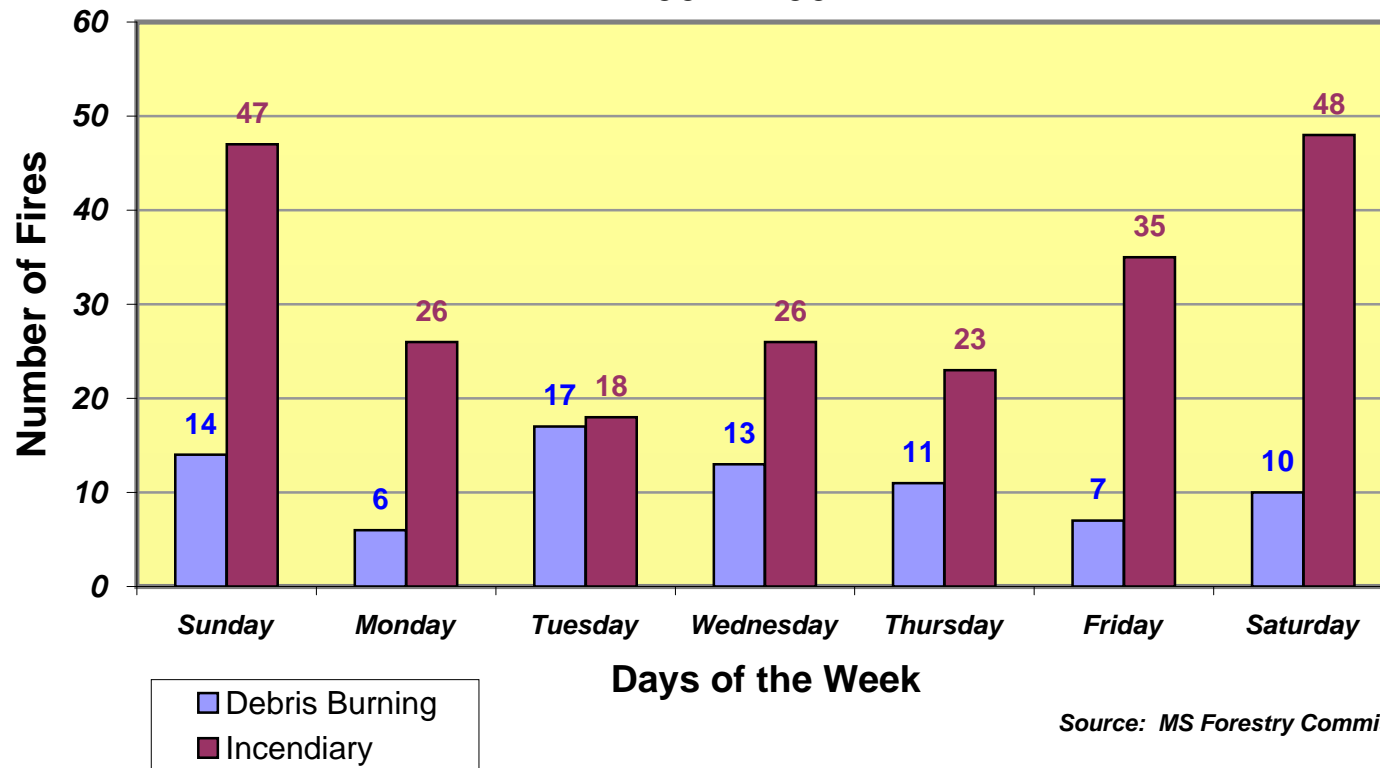
1. Fires by Cause, FY 2002-07
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5. Fires by Month, FY 2002-07
6. Fires by Hour of the Day, FY 2002-07
7. Fires by Day of the Week, FY 2002-07
8. Fires by Fiscal Year, FY 2002-07

BENTON COUNTY, MISSISSIPPI
County Wildfire Protection Plan
Fires by Cause, FY 2002 - 2007



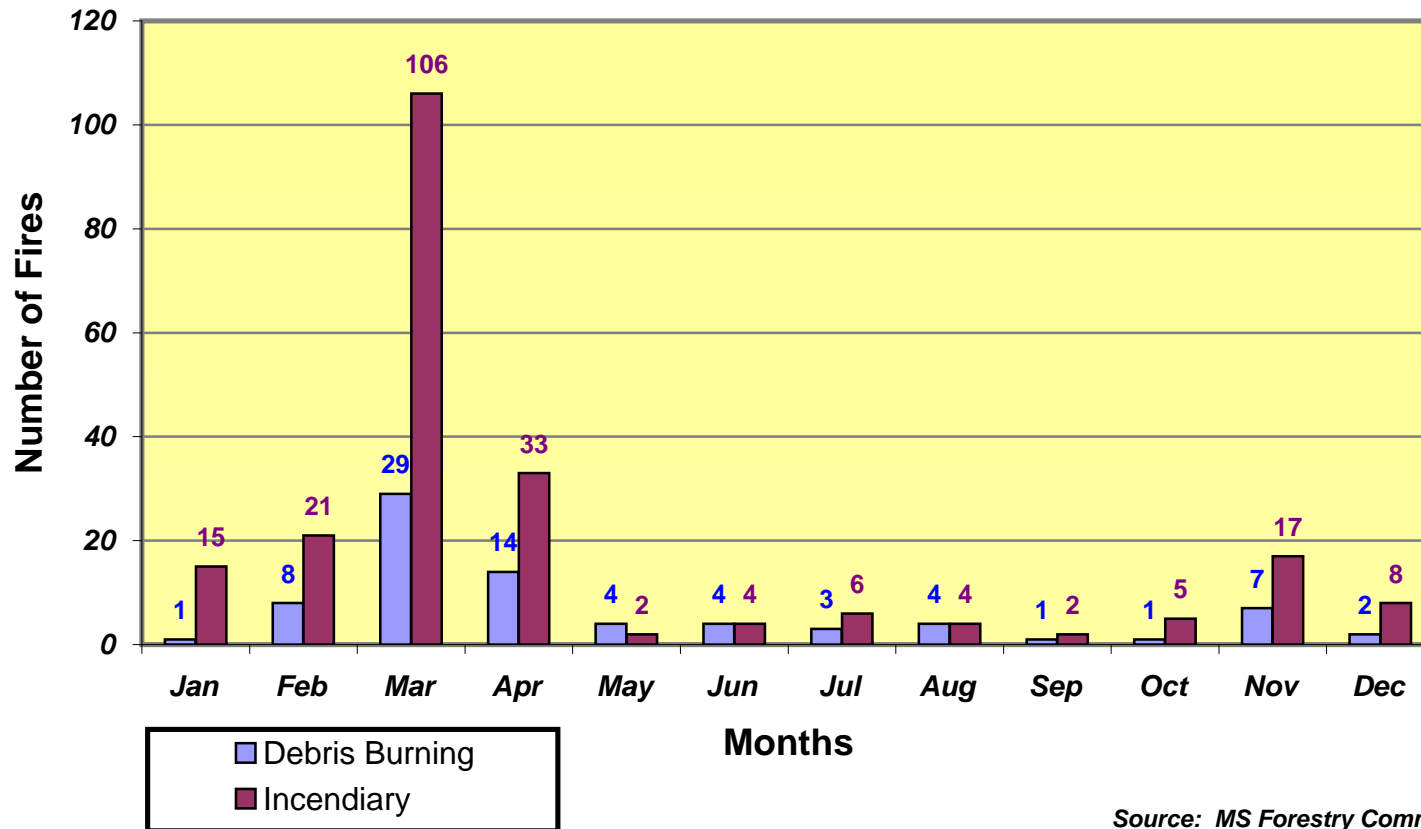
Source: MS Forestry Commission

BENTON COUNTY, MISSISSIPPI
County Wildfire Protection Plan
Debris Burning and Incendiary By Day of Week,
FY 2002 - 2007



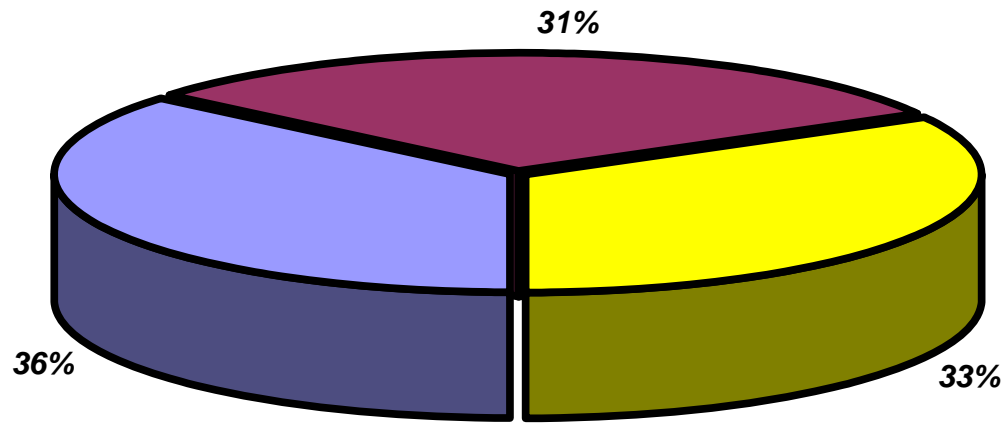
Source: MS Forestry Commission

BENTON COUNTY, MISSISSIPPI
County Wildfire Protection Plan
Debris Burning and Incendiary By Month, FY 2002 - 2007



Source: MS Forestry Commission

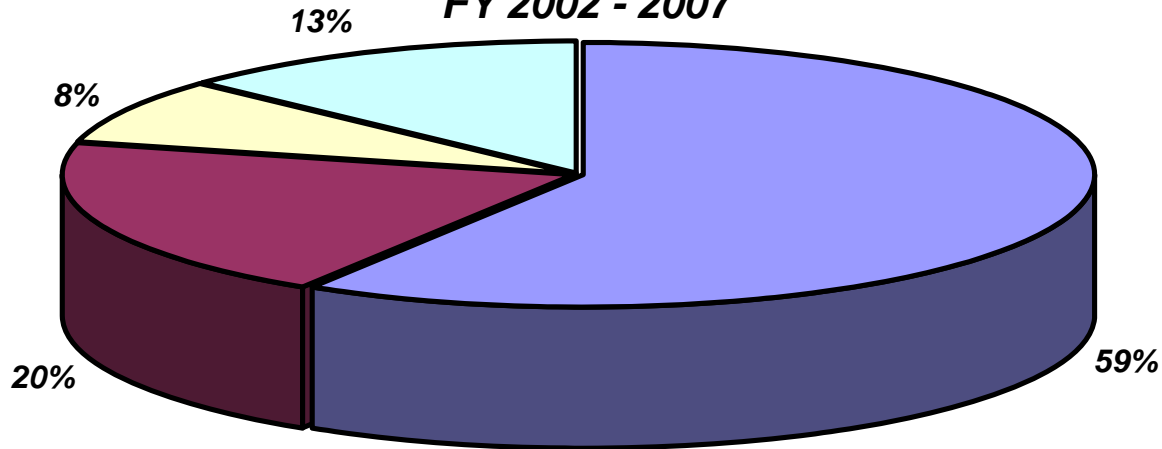
BENTON COUNTY, MISSISSIPPI
County Wildfire Protection Plan
Fires by Day of Month,
FY 2002 - 2007



■ 1st - 10th: 129 Fires	■ 11th - 20th: 111 Fires	■ 21st - 31st: 120 Fires
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Source: MS Forestry Commission

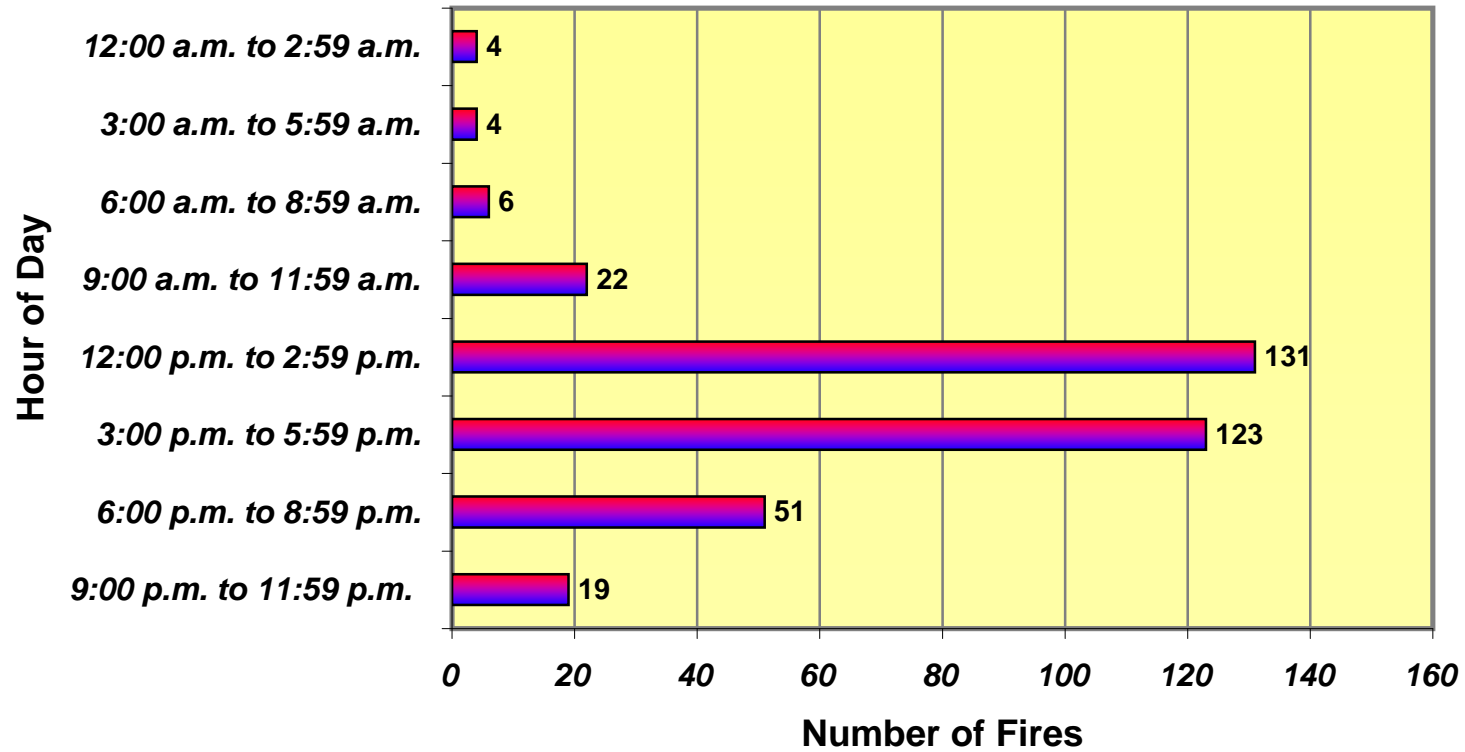
BENTON COUNTY, MISSISSIPPI
County Wildfire Protection Plan
Fires by Months (Quarterly),
FY 2002 - 2007



■ Jan - Mar: 212 Fires ■ Apr - Jun: 71 Fires ■ Jul - Sep: 30 Fires ■ Oct - Dec: 47 Fires

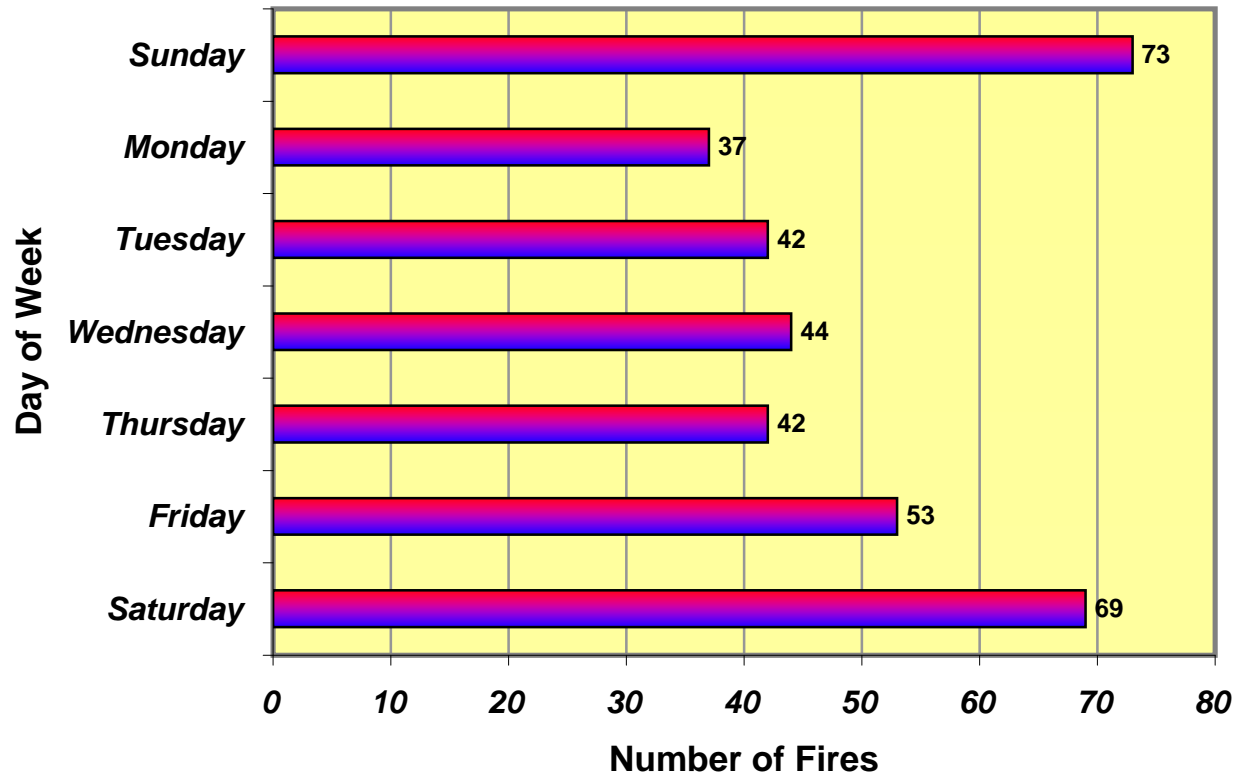
Source: MS Forestry Commission

BENTON COUNTY, MISSISSIPPI
County Wildfire Protection Plan
Fires by Hour of Day, FY 2002 - 2007



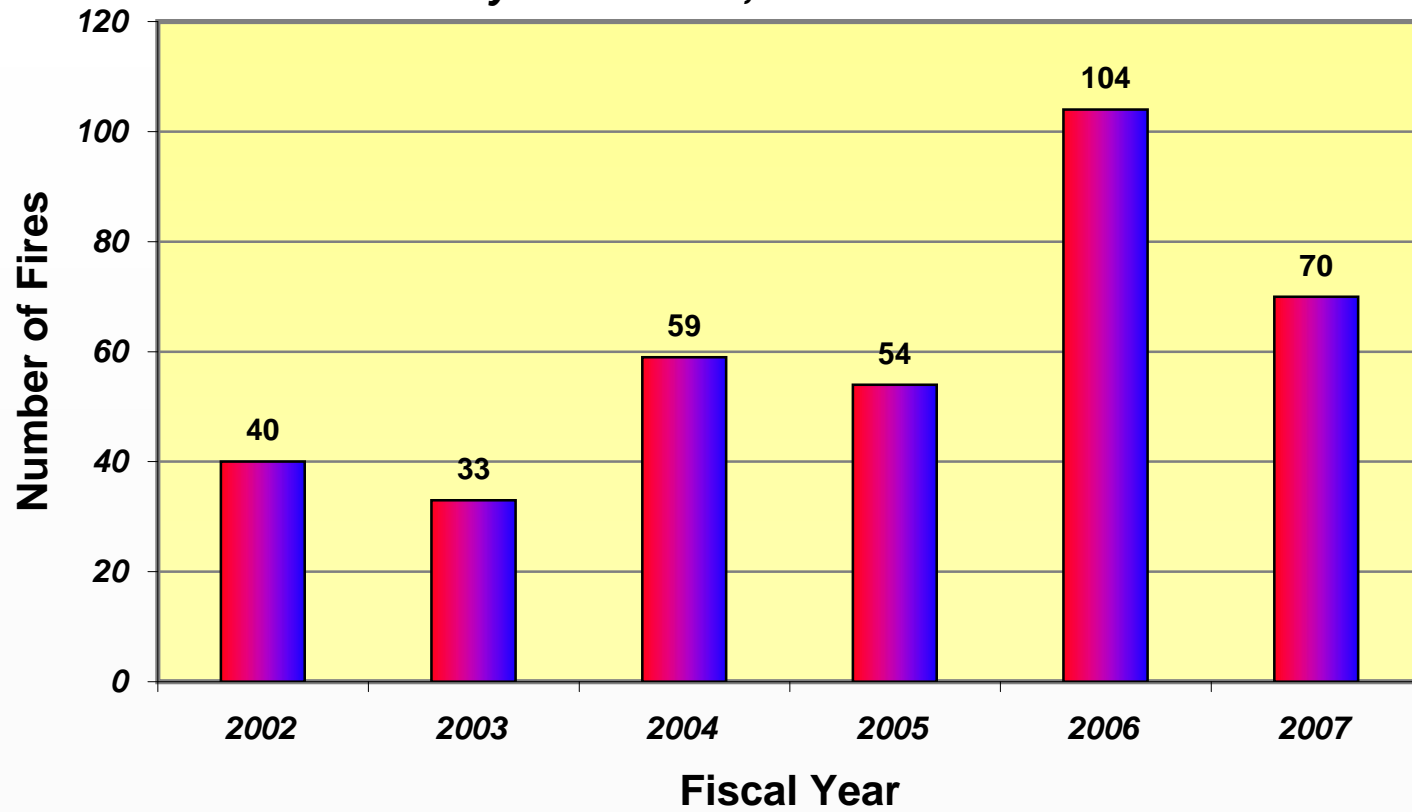
Source: MS Forestry Commission

BENTON COUNTY, MISSISSIPPI
County Wildfire Protection Plan
Fires by Day of Week, FY 2002 - 2007



Source: MS Forestry Commission

BENTON COUNTY, MISSISSIPPI
County Wildfire Protection Plan
Fires by Fiscal Year, FY 2002 - 2007



Source: MS Forestry Commission





County Risk Assessment

Through the County Risk Assessment, fuel hazards, frequency of wildfire occurrence, vulnerability of development and infrastructure, and emergency preparedness were all considered to compile the following list of county areas at risk from wildfire.

The Steering Committee endeavored to identify large facilities that may be at risk from wildfires due to their location, function, or potential impact to the community if damaged or lost to wildfire. Once identified, these at-risk areas were prioritized to enable available financial and human resources to be concentrated on specific mitigation projects in the future.

The objective of this task was to rate the areas from High to Low. Areas receiving the highest rating pose an increased risk due to their purpose, amount of nearby fuel load, or the matter of causing significant community impact in the event of damage or loss due to a wildfire. Mitigation projects for the at-risk areas include a wide variety of activities. Removal or reduction in fuel load may be suggested for some areas, with a public awareness campaign suggested for others.

Rating Key

	High
	Medium-High
	Medium
	Low

Fuel Hazards:

 *Oil or Gas Facility:* Gas Storage Tank

The storage tank is located within the city limits, and near a major intersection. The location and function require a **High** rating.

 *Oil or Gas Facility:* Pumping Stations (Gas) – Two Locations

These fuel pumping stations (one inside the City Limits of Ashland; one outside the City Limits) are kept well-maintained, but their functions require a **Medium-High** rating.

High Wildfire Occurrence Areas:

- *Communication (Emergency) Towers:* North Benton Communication Tower; Northeast Benton Communication Tower

These towers are located near their respective Volunteer Fire Departments and are within areas showing high occurrence for wildfires. Their function and locations rate them as **High**.

- *Transportation:* Illinois - Central Gulf Railroad

This railway travels through a proven area of high occurrence wildfires. The trains that travel this railroad have the potential to cause wildfires on their own. The rating is considered **High**.

- *Communities:* Canaan Community; Friendship Community

These communities are located within the Holly Springs National Forest and are also in high wildfire occurrence areas. They are rated as **High**.

- *Industry/Utility:* Iron Crafters Security Products

This facility is located outside the City Limits of Ashland and is in the Holly Springs National Forest. It is within a high wildfire occurrence area. The rating for this facility is **High**.

Vulnerable Facilities:

- *Public Facility:* Holly Springs National Forest

This source of out-door activities serves an important part in the recreational capacity of the County. Several portions of the National Forest are in High Fire Occurrence Areas, but southern areas of the Forest in Benton County have had a much lower number of wildfires. However, over all, there is a high risk of fire and smoke damage. The rating for this is **High**.

- *Public Facilities:* Ashland City Hall; Benton County Courthouse; Benton County Historical Museum

Ashland City Hall and Benton County Courthouse buildings and grounds are kept in excellent condition. However, they do contain many public records and house several offices for local government. In addition, the Museum features several artifacts and documents revealing the historical side of the County. This is an important local

landmark. The loss would be significant if any of these buildings were damaged or destroyed. These facilities are rated **High**.

Critical Infrastructure:

■ *Medical:* Benton Medical Center

The Center is rated **High**. The location is near a gas storage facility. There is no hospital in Benton County. Damage or loss of use would be significant to the community.

■ *Communication (Emergency) Towers:* Ashland Communication Tower; Thompson Road Communication Tower; Hickory Flat Communication Tower

Ashland's tower is located within the City Limits. The other two are located in the southern section of the County. Even though they are all well-maintained and have a low ignitability potential, the County would experience significant loss if they were damaged or destroyed. The towers are rated **High**.

■ *Substation:* TVA Substation

Though the area is very well maintained, the substation is not far from a gas storage tank. The risk of smoke or fire damage and the importance of its function rate it as **High**.

■ *Transportation:* St. Louis – San Francisco Railway

The trains utilizing the tracks have the potential to cause wildfires, some within municipal boundaries (Hickory Flat area). The rating is considered **High**.

■ *Elevated Water Towers:* Shiloh Road Elevated Water Tower; Abel's Store Elevated Water Tower

Shiloh Road's elevated water tower is located near the intersection of Highways 4 and 5. Though the area is kept maintained, there is a gas storage facility nearby, which places it at an increased risk. It is rated as **High**.

The Abel's Store Water Tower is near the Abel's Store VFD, and is used to fill the fire trucks' tanks for extinguishing purposes. The important function of this water supply, along with having a gas storage facility nearby, justifies a **High** rating.

-  Gas Storage Facility: Gas Storage Tank near Abel's Store VFD

This gasoline storage tank is used to fuel the fire trucks of the Abel's Store Volunteer Fire Department when responding to fires. The critical purpose of this supply of fuel, as well as the combustible risks, rates this as **High**.

-  *Industry/Utility:* Ashland Water & Gas Company; Magnolia Intergen

These facilities provide a much-needed service to the Ashland community. They are located near a gas storage facility and have an increased risk of fire or smoke damage due to their location. Their rating is **High**.

-  *Elevated Water Tower:* Hickory Flat Elevated Water Tower


This water tower provides a vital service to its community. Though the surrounding area is well-maintained, there is a gas pipeline near the site. The rating for this is **Medium**.

-  *Elevated Water Towers:* Industrial Park Elevated Water Tower; Fire Station Lane Elevated Water Tower

-  *Water Treatment Plant:* Industrial Park Water Treatment Plant

The areas surrounding these facilities are well-maintained, and have a low ignitability potential. Rated **Low** over-all.


Areas of Community Importance:

-  *Assisted Living Centers and Nursing Homes:* Briarcrest Extended Care; Oak Hill Personal Care Home

These centers are located within the City Limits of Ashland. Though they are well-maintained, they have an increased risk of smoke or fire damage due to their function. The rating is **High**.

-  *Industry/Utility:* Tranium Lumber

This hardwood sawmill facility is located within the Holly Springs National Forest. Its locality and function rate **High**.

-  *Medical:* North Benton Medical Center; Hickory Flat Family Medical Center

The grounds are well-maintained at all sites, but there is a moderate risk of fire and/ or smoke damage due to their locations near gas pipelines. They are rated **Medium-High**.

 *Schools:* Ashland Elementary School; Hickory Flat School

Though the buildings and grounds are kept well-maintained, the Ashland school is located near two gas pipelines; and the Hickory Flat School is located near a railroad track. With these added risks of smoke and fire damage, the educational facilities are rated **Medium-High**.

 *Communities:* Abel's Store Community; Michigan City Community

These communities are located in very rural areas, but do not have a significant record of wildfire damage. They are rated as **Low**.

 *Schools:* Ashland High School; Ashland Middle School

The schools are in good condition and are not exposed to an external risk of fire or smoke damage. The rating for these facilities is **Low**.

 *Industry/Utility:* TCI – North; TCI – South

These facilities provide a vital purpose within the service and labor market for automotives. They are kept maintained and are at minimum risk of smoke or fire damage. They are rated **Low**.

 *Medical Facilities:* Benton County Health Department

While some risks exist at this medical facility, a fire station is located nearby. The rating is **Low**.

Strategic Goals of the County Wildfire Protection Plan

At the beginning of the planning process, the Benton County Fire Coordinator agreed to several goals for the CWPP. These goals were set to provide a vision for the overall process, and to identify specific results to be obtained upon completion of the final document.

1. Define the Wild-land Urban Interface (WUI) for Benton County
2. Identify and prioritize high-risk areas within the WUI
3. Identify treatment methods for prioritized high-risk areas
4. Make recommendations to reduce structure ignitability
5. Identify needs of volunteer fire departments
 - a. Equipment (with emphasis on wildfires)
 - b. Volunteer firefighter recruitment
 - c. Volunteer firefighter retention
 - d. Fuel and insurance reimbursement for wildfire calls
6. Request education and outreach programs on wildfire prevention for young people
7. Identify strategies to encourage collaboration between Benton County and the Mississippi Forestry Commission

Mitigation Projects and Structure Ignitability Recommendations

Through the Community Risk Assessment several areas for improvement were identified. Mitigation projects for the at-risk areas may involve removal or reduction in fuel load for some, a public awareness campaign for others, or a combination approach.

One fuel treatment project that should be addressed is a fire prevention practice involving kudzu control. Kudzu is highly flammable and poses an increased risk of wildfire in some areas of the County. Some of the more vulnerable areas have taken steps in killing the vines, but there are still about 20,000 acres of kudzu within the County.

Among the sites discussed as being vulnerable facilities are those involving the use or transport of natural gas or other hazardous materials. There is an increased potential for structure ignitability at or near these sites due to the natural characterizations of these operations. Education of citizens residing or working near these facilities appears to be the best defense. Developers should be aware of these facilities and plan accordingly when building new subdivisions or industries.

Mitigation projects for High Occurrence Wildfire Areas were limited to a community outreach and education program involving the identification and prosecution of arsonists.

Mitigation Projects

COUNTY

1. Develop a homeowner education program.
2. Encourage large developments to become Firewise USA Communities.
3. Utilize an apprentice firefighting program.

In addition to mitigation projects, structure ignitability recommendations can be formulated and then distributed to homeowners. These recommendations, as condensed from information given by the MFC, through handouts, brochures, and the Firewise video, are steps that property owners can take to improve the protection and survivability of a structure in the event of a wildfire.

1. Design road width, grade and curves to allow access for large emergency vehicles.
2. Make sure dead-end roads and long driveways have turnaround areas wide enough for emergency vehicles. Construct turnouts along one-way roads.

3. Post clear road signs to show traffic restrictions such as dead-end roads and weight and height limitations.

Structure Ignitability Recommendations

HOMEOWNERS

1. Leave a minimum of 30' around structure for firefighting equipment access.
2. Widely space and carefully situate the trees you plant.
3. Construct driveway at least 12 feet wide with 13 feet of vertical clearance.
4. If home is gated, display a clearly visible address; provide a gate that swings inward and is at least 30 feet from the main road.
5. Remove "ladder fuels" (vegetation that serves as a link between grass and tree tops).
6. Keep trees and shrubs properly pruned. Lowest tree limbs should be 6' to 10' from the ground.
7. Remove leaf clutter from roof and yard.
8. Mow regularly.
9. Remove dead and over-hanging branches.
10. Keep firewood stacked away from the house.
11. Store and use flammable liquids properly.
12. Follow manufacturers' instructions when using fertilizers and pesticides.
13. Prevent collection of leaves and other combustible materials beneath home by installing proper skirting.
14. Cover vents with wire mesh no larger than 1/8" to prevent sparks from entering house.
15. Use non-flammable materials to construct trellises.
16. Use fire resistant building materials and roofing materials.

Action Plan and Assessment Strategy

The action plan and assessment strategy portion of the County Wildfire Protection Plan serves to identify roles and responsibilities, address funding needs, set timetables for carrying out identified activities, and measure the plan's effectiveness.

1. Fuel reimbursement and insurance for VFD's that extinguish wildfires without the aid of the MFC.

Responsibility: *Benton County Fire Coordinator, Mississippi Forestry Commission*

Funding: *Grant funds from Mississippi Forestry Commission*

Timetable for Completion: *Implement as soon as possible*

Expected Outcome: *Improve limited resources of the volunteer fire departments*

Assessment Timetable: *Review annually*

2. Purchase of wildland turnout gear and filtered breathing apparatus to be used at wildfires.

Responsibility: *Benton County Fire Coordinator*

Funding: *\$2,000 grant funding through MFC*

Timetable for Completion: *Five years, or as grants become available*

Expected Outcome: *Increased safety for volunteer and paid firefighters during the extinguishing of wildfires*

Assessment Timetable: *Review progress every two years*

3. Maintain, update, and redistribute the CWPP maps to all county departments, volunteer fire departments, and other organizations utilizing the documents.

Responsibility: *Benton County Fire Coordinator, Northeast Mississippi Planning and Development District*

Funding: *\$0*

Timetable for Completion: *Yearly*

Expected Outcome: *Increased awareness of fire activity leading to implementation of action plan in an effort toward reduction of fire incidents*

Assessment Timetable: *Make any additions or changes to maps on an annual basis. Interview other organizations to see if the maps make their role in wildfire prevention more effective.*

4. Encourage Mississippi Insurance Commissioner to consider rebate programs to allow for home assessments and homeowner mitigation projects.

Responsibility: *Mississippi Forestry Commission*

Funding: *\$0*

Timetable for Completion: *Every 4-6 Years*

Expected Outcome: *More homeowners participating in mitigation activities; lower insurance premiums for homeowners; additional funds for volunteer fire departments.*

Assessment Timetable: *Review after legislative sessions ends*

5. Establish an apprentice firefighter program to encourage young people to take an interest in their community by volunteering to aid their local fire departments.

Responsibility: *Benton County Fire Coordinator, along with local Fire Departments; MFC County Forester; Natural Resources Conservation Service; State Fire Marshall*

Funding: *Seek grant funding; Mississippi Forestry Commission; NRCS; National Fire Association*

Timetable for Completion: *Biannually, preferably May and October*

Expected Outcome: *Increased awareness of fire safety and prevention by young adults, as well as interest in protecting their communities by serving as firefighters at a future time*

Assessment Timetable: *Annual review of recruitment efforts and numbers*

6. Maintain and update the grants/funding resource list included in CWPP document.

Responsibility: *Benton County Fire Coordinator*

Funding: *\$0*

Timetable for Completion: *Yearly*

Expected Outcome: *Additional grant applications resulting in an increase of grant funds*

Assessment Timetable: *Review applications / funding annually*

7. Establish bi-annual meetings between the Mississippi Forestry Commission and the Benton County Volunteer Fire Departments.

Responsibility: *Benton County Fire Coordinator and the Mississippi Forestry Commission*

Funding: *\$0*

Timetable for Completion: *Implement immediately*

Expected Outcome: *Improved communications and coordination in the areas of firefighting, training, safety and project management*

Assessment Timetable: *2 – 5 years*

Potential Funding Sources

- 1. Assistance to Firefighters Grant (AFG) Program**
Website: www.firegrantsupport.com
Application Deadline: Spring, 2010
Program Description: Funding for training, equipment, vehicles, firefighter health and safety program, and operations
- 2. Fire Prevention and Safety (FP&S) Grant Program**
Website: www.firegrantsupport.com
Application Deadline: Fall, 2009
Program Description: Outreach to high risk target groups including children, senior citizens, and firefighters.
- 3. Staffing for Adequate Fire and Emergency Response (SAFER) Grant Program**
Website: www.firegrantsupport.com
Application Deadline: Summer, 2010
Program Description: Funding for the hiring of fire personnel and incentives for volunteer recruitment and retention
- 4. USDA – Rural Development Community Facilities Grant Program**
Website: www.rurdev.usda.gov
Application Deadline: Applications taken year round
Program Description: Funding for assistance in constructing, enlarging, or improving community facilities for public safety
- 5. Mississippi Forestry Commission**
Website: mfc.state.ms.us
Application Deadline: Approximate date – Mid to Late October, 2008
Program Description: Wildland fire gear (Ready Kits), which consists of nomex coveralls, helmet, headlamp, neck shroud, gloves, and a bag for storage
- 6. First Responder Institute Website**
Website: www.firstresponder.org
Program Description: Provide support to local U.S. fire departments and emergency service personnel

- 7. Responder Knowledge Base Website**
Website: www.rkb.mipt.org
Program Description: Website contains information on currently available products, standards, training, and grants
- 8. Mississippi Volunteer Fire Assistance Program**
Website: www.mfc.state.ms.us
Application Deadline: TBA
Program Description: This program provides grants to eligible fire departments for the purchase of Wildland Firefighter Ready Kits. This grant is a 50/50 matching grant; however, match portion will be covered by the Mississippi Forestry Commission.
- 9. Rural Fire Truck Acquisition Assistance Program**
Website: www.doi.gov
Application Deadline: June, 2010 (estimate)
Program Description: Helps rural FDs meet accepted standards of wildland fire qualifications, training, and performance for initial and extended attack at the local level.
- 10. Grants Office**
Website: www.firegrants.info and www.grantsoffice.com
Program Description: Provides information, tools, and tips to help fire departments be more successful at obtaining funds from the Assistance to Firefighters Grants Program

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