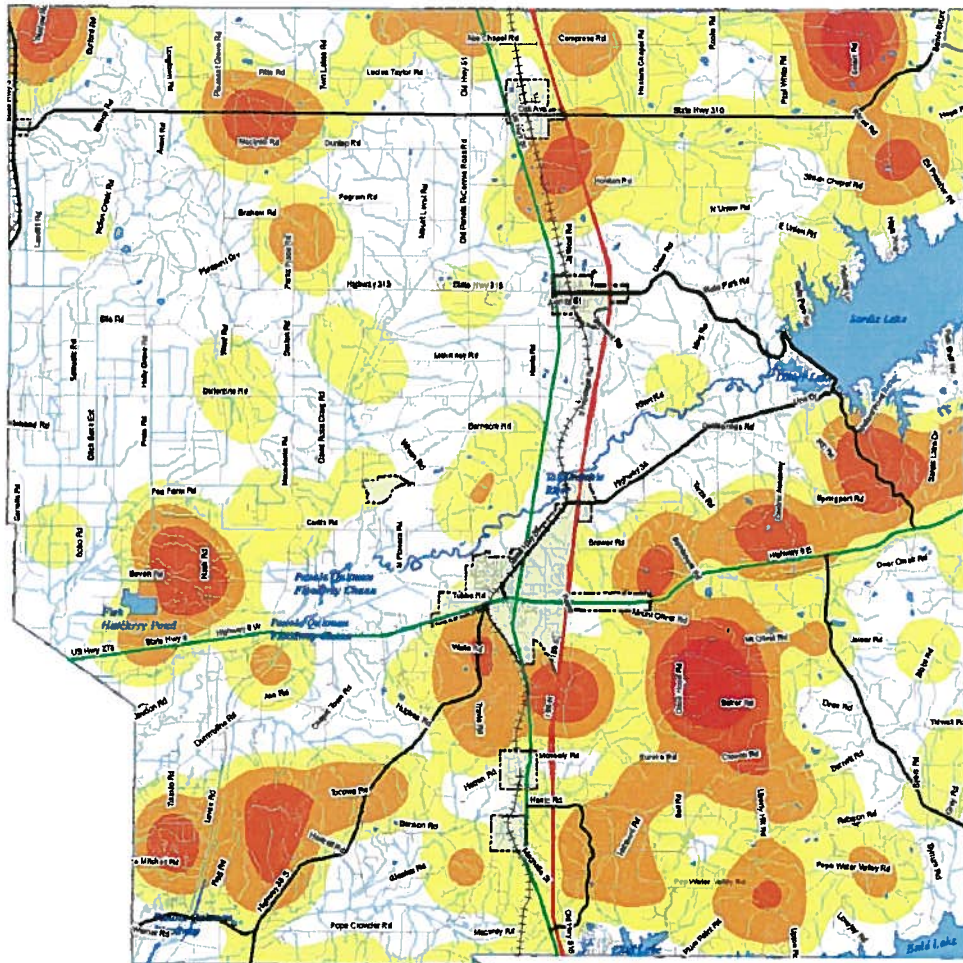


# Panola County, Mississippi County Wildfire Protection Plan



September 2008

PREPARED BY NORTH DELTA PLANNING AND DEVELOPMENT DISTRICT WITH FUNDING PROVIDED BY THE MISSISSIPPI FORESTRY COMMISSION.

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## Introduction

The Panola County Wildfire Protection Plan (CWPP) was collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties. It is the second of two plans produced for the Mississippi Forestry Commission. The purpose of the plan is to reduce damage caused by future wildfires to people, property, and critical infrastructure in the county. Fire causes, trends, patterns, and other pertinent information were analyzed to determine vulnerability to forest and rangeland fires. Findings from this information were used to develop fire prevention strategies and techniques, which are outlined in this plan.

The Mississippi Forestry Commission was mandated by state legislature to protect the state's forestland in 1926. At the time of their inception, wildfires were destroying more than 5 million acres of timberland each year. Since that time great steps have been made in wildfire prevention, detection, and suppression. Despite this fact, wildfires continue to plague Mississippi. On average, there are about 5,000 wildfires each year in Mississippi burning over 60,000 acres (Source: Mississippi Forestry Commission).

Wildfires play an important role in many forest and rangeland ecosystems. Over time, however, the natural fires patterns that once existed have been disrupted in an attempt to extinguish every fire that burns on public lands. Therefore, as more communities develop in areas adjacent to fire-prone lands in what is known as the Wildland / Urban Interface (WUI),<sup>1</sup> wildland fires pose increasing threats to people and their property (Source: National Fire Plan).

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<sup>1</sup> The wildland-urban interface (WUI) is commonly described as the zone where structures and other human development meet and intermingle with undeveloped wildland and vegetative fuels.

In 2003, the federal government passed the Healthy Forests Restoration Act (HFRA). This landmark legislation provided communities with greater incentives than ever before to engage in preventative and proactive planning. It also encouraged the United States Forest Service (USFS) and the Bureau of Land Management (BLM) to give priority to local communities that develop and implement forest management and hazardous fuel reduction projects. As a result, communities are now rethinking their approach to wildland fire protection. This approach, which is commonly referred to as community-based forest planning and prioritization, provides proven strategies for wildland fire prevention (Source: Preparing a Community Wildfire Protection Plan).

As the initial step in the planning process, a Strategy Committee was created to represent the interests of Panola County. The team consisted of members from county and municipal governments, local fire departments, emergency management agencies, and the state agency responsible for forest management. These individuals came from diverse backgrounds, representing a broad range of experience and expertise. As the core decision-making team, their primary responsibilities included identifying and prioritizing areas for hazardous fuel reduction treatments, recommending types of treatment to protect at-risk communities and critical infrastructure, and developing strategies to reduce the ignitability of structures throughout the county. The team accomplished this task by taking on a comprehensive planning process that emphasized the development of a CWPP.

This plan is based on an analysis of fire data sets for the fiscal years 2002 through 2007. Fire causes, trends, patterns, and other pertinent information were studied to determine the county's vulnerability to wildfires. Additionally, telephone surveys with local fire departments,

face-to-face interviews with key informants, and strategy committee meetings were helpful for determining the current level of preparedness and capability of each local fire department. Findings from this information were used to develop fire prevention strategies and mitigation activities that will enhance fire protection services in the county, thus reducing damage caused by wildfires to people, property, and critical infrastructure.

## Panola County, Mississippi

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### Area Description



Panola County is located in the upper northwestern part of Mississippi. It has two county seats, Batesville and Sardis. Batesville is about 60 miles south of Memphis, Tennessee, and about 140 miles north of Jackson, Mississippi, the state capital. Sardis is about 10 miles

northeast of Batesville. According to the 2000 Census, the population of the county was approximately 34,274 people, with a total of 13,736 housing units. The six municipalities located in the county are Batesville, Como, Courtland, Crenshaw, Pope, and Sardis. Other small communities in the unincorporated areas include Askew, Buxton, Curtis Station, Longtown, Pleasant Grove, and Tocowa.

There are a variety of local, state, and federal highways in the county. These roads range from two-lane to major four-lane and interstate highways. Interstate 55, which runs north and south, is the only major transportation corridor. Other primary federal and state highways passing through the county are United States Highway 51 and Mississippi State Highways 6 and 35. Other lesser traveled or secondary highway corridors include Mississippi State highways 310, 315, and 322. These roads will serve as evacuation routes during the event of a major wildfire.

The county is predominantly rural and comprises a total land area of approximately 685 square miles or 437,000 acres. It consists of three areas that extend from north to south across

the county. From west to east these areas are the Mississippi River alluvial plain, a wide belt of deep loess, and a part of the Coastal Plain. The topography of the land ranges from gently rolling hills and valleys to flat, open rangeland. A breakdown of the acreage reveals that forty-six percent (46%) or 201,000 acres is forestland. The primary forest cover type is hardwood, with the second largest group being pine. Thirty-three percent (33%) or 145,000 acres is used for agricultural purposes. Cotton, corn, soybeans, and wheat are the main crops, although beef cattle are also important. The remaining land area (21% or 91,000 acres) is spread between residential, commercial, and industrial land use.

The climate of Panola County is mild with an average annual temperature of 60 degrees Fahrenheit. Average temperatures range from 32 degrees in the winter to 91 degrees in the summer. The average annual rainfall is 52.6 inches. Wind speeds in the county average less than 10 miles per hour. Drought-like conditions occur on occasion, and have prompted several burn bans in the county over the past couple years.

There are approximately sixteen local fire departments located in Panola County. Their level of emergency preparedness and capability varies from one fire district to the next. All of them except one are manned by volunteers who act as first responders to the fires within the county. They include Batesville, Bynum, Coles Point, Como, Courtland, Crenshaw, Crowder, Curtis / Locke Station, Mount Olivet, Pleasant Grove, Pope, Sardis, Sardis Lower Lake, Union, Red Hill, and Longtown. A listing of each station in the county, including the address and the number of staff and / or volunteers, is listed below.

**Table 1: Panola County Fire Departments**

Fire Response Area	Fire Department	Address	Number of Staff
Fire District 1	Batesville	105 College Street Batesville, MS 38606	30
Fire District 2	Bynum	13510 Eureka Road Batesville, MS 38606	30
Fire District 3	Coles Point	1270 Sardis Lake Drive Batesville, MS 38606	15
Fire District 4	Como	202 Main Street Como, MS 38619	9
Fire District 5	Courtland	536 Main Street Courtland, MS 38620	20
Fire District 6	Crenshaw	100 East Missouri Ave. Crenshaw, MS 38621	25
Fire District 7	Curtis/Locke Station	2809 Curtis Locke Station Rd Batesville, MS 38606	10
Fire District 8	Mt. Olivet	6507 Mt. Olivet Road Batesville, MS 38606	20
Fire District 9	Pleasant Grove	9566 Highway 315 Sardis, MS 38666	5
Fire District 10	Pope	788 Pope–Water Valley Rd. Pope, MS 38658	18
Fire District 11	Sardis	115 West Lee Street Sardis, MS 38666	18
Fire District 12	Sardis Lower Lake	28521 Highway 35 Sardis, MS 38666	15
Fire District 13	Union	100 Simon Chapel Road Sardis, MS 38666	10
Fire District 14	Red Hill	3201 Barnacre Road Batesville, MS 38606	10
Fire District 15	Longtown	4975 Highway 310 Crenshaw, MS 38621	7
Fire District 16	Crowder	450 Quitman Avenue Crowder, MS 38622	14
<b>Total</b>	<b>16</b>		

Source: Local Fire Departments (Number of staff varies due to seasonal fluctuations)



## Strategic Goals

This section of the CWPP describes the mitigation goals and objectives that will reduce Panola County's risk to future wildfires. They set clear priorities for the implementation of wildfire mitigation in the county as it relates to fuel reduction and structure ignitability reduction. This includes prioritized recommendations for the county as a whole and also for individual homeowners where appropriate. The goals are broad statements that set short-term and long-term priorities for reducing damage caused by future wildfires to people and property. They serve as a basis for development of the specific plan objectives and mitigation activities, which are outlined in the action plan. The objectives break down the identified goals into tasks that are measurable and time oriented. The goals and objectives selected by the Strategy Committee are as follows:

**Goal 1:** Define the Wildland – Urban Interface (WUI) for Panola County.

**Objectives:**

- Establish a localized definition and boundary for the WUI<sup>2</sup>.
- Identify where structures and other human development merge with undeveloped wildland or vegetative fuels.
- Develop a community base map.

**Goal 2:** Promote education and outreach programs to improve the knowledge and awareness among commercial, industrial, and residential citizens about their vulnerability to wildfires and steps that can be taken to reduce them.

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<sup>2</sup> In the absence of a CWPP, Section 101 (16) of the HFRA defines the wildland-urban interface as an area extending ½ mile from the boundary of an at-risk community. This boundary may vary from one community to the next.

**Objectives:**

- Advise the public of health and safety precautions to take against wildfires through public outreach and education programs on wildfire prevention.
- Identify and coordinate with potential partners for disaster and wildfire information dissemination (e.g. National Fire Protection Association).

**Goal 3:** Reduce risks and vulnerabilities of people and structures in the WUI.

**Objectives:**

- Define critical facilities and infrastructure.
- Assess the vulnerability of facilities and infrastructure.
- Identify and prioritize high-risk areas within the WUI.
- Identify treatment methods for prioritized high-risk areas.

**Goal 4:** Reduce risks and vulnerabilities of people and structures in other at-risk areas.

**Objectives:**

- Identify and reduce vulnerability of new and existing structures and other critical infrastructure through the incorporation of appropriate hazard mitigation measures.
- Assist local governments in identifying and reducing the vulnerability of people and property through the support of local mitigation strategies that emphasize fuel reduction and structure ignitability projects.

- Regulate building practices that reduce the vulnerability of structures and other critical infrastructure through building codes and county ordinances.

**Goal 5:** Improve firefighting preparedness and capability of the local fire departments.

Objectives:

- Identify new funding mechanisms to purchase needed equipment to fight wildland fires (e.g. specialized fire suits and brush trucks).
- Increase access to wildland fire training opportunities.
- Identify recruitment and retention strategies for volunteers.

**Goal 6:** Improve firefighting preparedness and capability of the Mississippi Forestry Commission.

Objectives:

- Identify new funding mechanisms to purchase needed equipment to fight wildland fires (e.g. specialized fire suits and brush trucks).
- Encourage better communication, collaboration, and cooperation between Panola County and the Mississippi Forestry Commission.
- Identify strategies to improve firefighting capabilities.

## **Mapping**

This section of the plan describes the seven Geographic Information System (GIS) maps created for this plan. Each map provides a unique snapshot view of the county's existing vulnerability to wildfire. They were used to identify at-risk areas in and around the WUI, wildfire patterns and trends, and emergency preparedness in the county, all of which led to the development of specific mitigation projects and activities. The maps include the following:

- (1) Panola County Base Map
- (2) Panola County Risk Assessment Ratings
- (3) Panola County Fire Data 2002 – 2007
- (4) High Occurrence Wildfire Areas
- (5) Arson Fires 2002 – 2007
- (6) Panola County Fire Response Area
- (7) Wildfires by Fire Response Area

The Panola County Base Map identifies the WUI zone (i.e. the boundary that will protect the community at risk), inhabited areas at risk to wildfires, areas containing critical human infrastructure at risk from fire disturbance events (e.g. escape routes, municipal water supply structures, major power of communication lines), and land ownership / management, private land, and structural fire department boundaries. According to Section 101 (16) of the HFRA, in the absence of a CWPP wildland-urban interface should be set at ½ mile from the boundary of an at-risk community. Because this boundary typically varies from one community to the next, the Strategy Committee played a critical role during the identification stage of the project. A

county-wide base map was presented to the group for assessment and recommendations. It was noted that large amounts of vegetation are present in locations where wildland meets development or, as one member called it, “where country meets urban.” The Panola County WUI identifies where the highest amount of development exists, and critical infrastructure including evacuation routes, water towers, and utilities. It was used to identify risk factors and treatment projects that can reduce the loss of life, property, and critical infrastructure in the county.

The Risk Assessment Map identifies the critical facilities and infrastructure located in the county and assesses their risk to wildfire. This map was used by the Strategy Committee to prioritize areas for fuel reduction treatments and identify the highest priority uses for available financial and human resources. Factors such as fuel hazards, risk of wildfire occurrence, homes, businesses, and other essential infrastructure at risk were considered in the overall assessment, and a risk rating of high, medium, or low was assigned to each factor. All identified areas that warrant protection were charted on the base map in order to develop a useful tool during the final decision-making process.

The fire occurrence maps, which include numbers 3 through 5 listed above, were created using fire data sets obtained from the Mississippi Forestry Commission. The data reflects wildfires, controlled burns, and other causes of fire. These include lightning, smoking, debris burning, arson, equipment use, and reignition. From 2002 through 2007<sup>3</sup>, Panola County experienced approximately 151 fires. A breakdown of these fires indicate there were 26 in

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<sup>3</sup> The fire occurrence maps were created from fire data sets collected from the Mississippi Forestry Commission for fiscal years 2002 through 2007, not calendar years.

2002, 18 in 2003, 33 in 2004, 27 in 2005, 45 in 2006, and 2 in 2007. These maps were helpful for determining specific mitigation projects or actions that could be used to reduce the loss of life, property, and critical infrastructure in the county.

The last two maps highlight the Panola County Fire Response Areas. One reflects the location of each local fire department and its service area, and the other lists wildfire occurrences during the five year time period. These maps served as a valuable resource while formulating mitigation projects and activities. Copies of all seven maps are located at the end of this document.

## County Risk Assessment

This section describes the at-risk areas identified in the CWPP. A risk assessment was used to identify and prioritize mitigation activities that can reduce loss of life, property, and critical infrastructure in Panola County. Risk factors such as fuel hazards; risk of wildfire occurrence; home, businesses, and essential infrastructure; other community values at risk, and local preparedness and firefighting capability were studied to determine the vulnerability of these areas to wildfire.

During the initial planning stages, the Strategy Committee helped develop a list of areas at risk to wildfires. A rating key was developed to aid in this process. Because the levels of risk vary from one place to the next, depending on the location and the amount of vegetative or organic fuels present at the site, the ratings were based on the potential economical, social, cultural, or environmental severity of a wildfire. A score of high, medium – high, medium, or low risk was then applied to each area. These scores enabled the committee to identify areas for fuel reduction treatment and to prioritize mitigation projects and activities accordingly.

<u>Rating Key</u>	
■	Low
■	Medium
■	Medium – High
■	High

Rating levels ranging from low to high were assigned to each facility, structure, or area in the county that proposes a risk. Areas that were given a higher rating pose a significantly greater risk than those that do not. The ratings were based on factors such as amount of fuel load nearby and community impact if damaged or lost. Mitigation projects and activities

identified in this plan provide recommendations that homeowners and communities can implement to reduce the ignitability of structures - from fuel reduction projects to community awareness campaigns. The following list describes the areas and critical infrastructure / facilities at risk to wildfire.

### **Critical Infrastructure, Facilities, and Areas**

#### ■ Tennessee Gas Pipeline Company

This facility is located along Highway 6 West in close proximity to a moderate risk area. The risk of fire to this structure is low, as there is an adequate buffer zone around this facility. Because of its function as a natural gas provider, a risk rating of high was assigned.

#### ■ Interstate 55

This is the only major four-lane highway in the county. Because it is a heavily traveled road that is often used to transport hazardous materials, it was assigned a risk rating of high.

#### ■ Canadian National Railroad

This class-one railroad runs north to south along the center of the county. A small portion of tracks is also located in the northwestern part of the county. Because of the hazardous chemicals and materials hauled along both of these routes, a risk assessment of high was assigned.

#### ■ Water Towers

All of the water towers located throughout the county were rated low, because they have low ignitability potential and are well maintained with good buffer zones.



- Fire Departments

All of them are strategically located throughout the county and are of critical importance during the event of a wildfire. Because there is little risk of fire or smoke at any of the stations, these facilities were given a risk assessment of low.

- Electric Substations

There are less than ten electrical substations in the county. Although they have well maintained good buffer zones around them, a risk assessment of medium was assigned.

### **Vulnerable Facilities**

- Pope Elementary

This school is located in a low risk area of the county in the Town of Pope. While there is only a moderate risk of fire present at this facility, its proximity to a forested area presents a smoke risk. For this reason, a risk assessment of medium was assigned to this facility.

- Tennessee Gas Transmission Pipelines

- Shell Pipe Line

- Mid Valley Pipe Line

- Trunkline Gas Lines

- ANR Gas Pipelines

Several pipelines containing natural gas and petroleum run through the county. Due to their function and impact if damaged or destroyed, they were all given a risk rating of high.

■ **Sardis Lake (Wildlife Management Area)**

The lake and its surrounding territory, which is one of four in North Mississippi operated by the U.S. Army Corps of Engineers, have acreage located in moderately at-risk areas. Because there is a significant amount of residential housing located in close proximity to this area, a risk assessment of medium was assigned.

■ **Enid Lake (Wildlife Management Area)**

The lake and its surrounding territory, which is one of four in North Mississippi operated by the U.S. Army Corps of Engineers, have more than 43,000 acres of field and forest land. Because portions of this land are located in a moderate to medium concentrated at-risk area with a considerable portion of residential housing, a risk assessment of medium was assigned.

■ **Charles Nix Ray Wildlife Management Area**

This area is located in a low risk area of county, consisting of approximately 4,000 acres of forest and timberland. Because of its location, a risk assessment of low was assigned.

■ **Hunter Trace Subdivision**

This residential neighborhood is located along Highway 6 East in a moderate risk area of the county. Because there is only one entrance in and out of the property, which is completely surrounded by pines, a risk assessment of high was assigned.

■ **Sherwood Forrest Subdivision**

This residential neighborhood is located along Highway 35 South in a moderate to medium risk area of the county. Due to its location, size, and the number of fires occurring in this area, a risk assessment of high was assigned.

- **Batesville Job Corp Center**

This facility is located within the City of Batesville along Highway 51 South and is on edge of the WUI. Because of its location, proximity to woods, and the number of students living on campus, a risk assessment of high was assigned.

**Areas of Community Importance**

- **Fairfield Assisted Living**

This facility is located in a low to moderate risk area within the City of Batesville along Keating Road. There are both smoke and fire risks at this assisted living nursing home. Because of the nature of the facility and people living there, a risk assessment of high was assigned to this structure.

- **Beverly Health Care**

This facility is located in a moderate risk area within the City of Batesville along Woodland Road. There are both smoke and fire risks present at this elderly health care facility. Because of its proximity to a highly wooded residential area, a risk assessment of high was assigned to this structure.

- **Sardis Community Nursing Home**

This facility is located in a moderate risk area within the City of Sardis along East Lee Street. The primary risk present at this facility is smoke, although under the right circumstances there could be a fire risk present. Due to its location and its proximity to a heavily wooded area, a risk assessment of medium-high was assigned to this structure.

■ **Batesville Crisis Intervention Center**

This facility is located in a low to moderate risk area on the perimeter of the WUI. There is both a fire and smoke risk at this facility. Due to its location and proximity to a heavily wooded area, a risk assessment of high was assigned.

## **Emergency Preparedness**

This section assesses the preparedness and firefighting capability of the sixteen fire departments in Panola County. An evaluation of each fire district was conducted to provide an accurate picture of the existing situation. Three primary sources of information were used to accomplish this task. Strategy Committee meetings were held during the initial planning stages of the project. They provided insight regarding areas in need of improvement throughout the county, and were helpful for developing improvement strategies. Telephone surveys were also used to collect general information from each department. Every fire chief in the county was asked questions regarding fire ratings, manpower, equipment, and department strengths and weaknesses in order to determine how well their department is equipped to meet the needs of its district. In addition, a Capabilities and Resource List was obtained from the Panola County Emergency Management Agency. These documents describe the level of emergency preparedness and capability in the county, and are located at the end of this section. The findings from these sources of information identify improvements that could be made to enhance fire protection services within the county.

The Mississippi State Rating Bureau (MSRB) assigns public protection certifications to every fire district and municipality in the state. This classification determines the fire insurance rating for a particular district. The rating is based on a number of factors such as fire losses, economic conditions that affect improvements, deterioration of fire protection services, unusual climatic conditions, and other unforeseen and unpredictable events. Areas that demonstrate a greater capacity to protect its citizens and property receive a lower rating than

those who do not. It is worth noting that lower ratings translate into lower insurance rates for homeowners. Following the recommendations outlined in this plan could improve the range of fire protection services available throughout the county, resulting in improved fire ratings and quality of life. The sixteen fire districts in Panola County are listed below along with their corresponding MSRB classification.

**Table 3: Fire District Ratings Panola County, 2008**

<b>Fire District Name</b>	<b>Class</b>
Batesville	6
Bynum	10
Coles Point	9
Como	8
Courtland	9
Crenshaw	9
Crowder	10
Curtis / Locke Station	10
Mt. Olivet	8
Pleasant Grove	10
Pope	10
Sardis	7
Sardis Lower Lake	10
Union	10
Red Hill	10
Longtown	10

*Source:* Mississippi State Rating Bureau

All of the fire departments in the county, with the exception of Batesville, are staffed by volunteers. These individuals represent a skilled and trained network of key staff and

personnel. In terms of manpower, several of the volunteer fire departments suffer from a lack of manpower. This can be attributed to the fact that these departments are located in sparsely populated areas of the county where resources are scarce and are staffed by volunteers who work full-time during the day. Difficulty recruiting and retaining volunteer firefighters was also a concern. This could be due to numerous reasons including rising fuel costs, lack of incentive, or apathy. In either case listed above, fire recruitment and retention strategies and outreach and education programs could be used to alleviate these concerns by fostering community awareness and support.

Access to equipment plays an important role in extinguishing fires in the county. None of the local fire departments have the appropriate gear to fight wildfires. As a result, firemen are responding to wildland fires wearing turn-out gear used to fight structural fires involving residential homes or industrial buildings. Reliability of existing equipment was also a concern. Several of the rural volunteer fire departments are relying on vehicles that are well beyond their intended service use. In some cases, these vehicles are more than twenty years old and are in constant need of repair. Both of these issues pose a serious threat to the safety of the firemen and public for obvious reasons (i.e. loss of life, property, and critical infrastructure). It was recommended that each department take steps to identify and secure grants funds to purchase these items. A listing of potential funding sources is located in section 9 of the plan.

Communication is critical component of wildfire prevention and protection. Delayed response times, which can cause devastating effects upon a community, are often the result of a lack of communication. That is why verbal, written, and electronic communication between the local fire departments and the Mississippi Forestry Commission (MFC) is absolutely critical.

While the relationship between these two agencies has been a fairly successful one, improvements could be made. It was also suggested that sharing radio channels and / or establishing quarterly meetings could greatly improve interagency communication at a local and state level, thus enhancing the overall level of fire protection services currently available in the county.

There were a number of strengths highlighted in the survey. Manpower was listed as the number one strength by all the fire districts in the county, even though the amount of available manpower was often low. As first responders to the fires within the district, area staff and volunteers provide a critical piece of the public safety infrastructure in the county. Automatic mutual aid agreements between all fire districts in the county were also seen as a positive, especially in the event of a major wildfire. In many cases, these agreements extend across county lines. Others strengths mentioned were teamwork, experience, quick response times, and access to training opportunities.

A number of weaknesses were also highlighted in the survey. The most commonly cited weakness among all the fire organizations in the county was the lack of wildland fire equipment. It was suggested that creating and maintaining a grants database could prove useful for identifying potential funding sources to alleviate this concern. This list should be kept current and updated on an annual basis. The second most reported weakness was difficulty recruiting and retaining volunteers. While community outreach and education programs were seen as a tool for increasing volunteer support, there was uncertainty regarding the effectiveness of these endeavors. Lack of incentive is thought to be a major contributing factor, despite the fact that volunteers are eligible to receive a free life insurance policy and reduced



rates on license plates. Lack of water was also identified as an issue. It was suggested that inventorying private ponds and other sources of water could reduce the time it takes the pumper trucks to refill and return to the scene of the fire. Other weaknesses included poor response times during the day, communication at a local and state level, and reporting issues.

A resources and capabilities list<sup>4</sup>, which was obtained from the local emergency management agency, was used in combination with the survey and strategy meetings to determine the level of emergency preparedness in the county. This list highlights the capabilities and resources available to each department. Because the level of emergency preparedness and capability varies from one district to the next, efforts should be made to continue to improve the quality and reliability of fire protection services in the county. They are located on the following page.

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<sup>4</sup> The resources and capabilities lists are based on the most recent information available at the time this report was produced.

## Panola County Fire Services

### Resources List (1 of 2)

DEPARTMENT	FIRE	Apparatus	Pumpers	Tankers	Aerials	Brush	Support	Dump Tank	SCBA	SCBA alline units	Spare cylinders	SCBA Refill (stationary)	SCBA Refill (mobile)	AFF Foam (Gal.)	Deluge Set	Positive Press Fans	Float pumps	Laptop computers	Thermal image camera	GIS locators	Gas Detectors	Aux. Power/lighting	Fixed to apparatus	Fixed to Station	Portable	110 v area lights	Power cords (feet)
Batesville *			3	1	1	1		1	22	4	22	1	1	100	3	4	1	X	3	5	3		5	2	3	X	750
Bynum			2	5	0	1		2	10	0	10	0	0	0	1	2	1	0	0	1	1		2	1	1	2	200
Coles Point			2	1	0	0		1	17	0	17	1	0	0	1	2	1	0	0	1	1		1	1	1	4	200
Como *			2	0	0	1		0	12	0	12	0	0	10	1	1	0	0	0	1	2		2	0	1	6	300
Courtland *			1	1	0	1		1	16	0	18	0	0	40	1	2	0	0	0	1	1		1	1	3	2	250
Crenshaw			2	1	0	1		0	4	0	6	0	0	0	1	2	0	0	0	1	1		0	0	3	2	200
Curtis-Lock Station			2	1	0	1		2	10	0	6	0	0	0	0	1	1	0	0	1	1		1	1	1	2	200
Mt. Olivet			2	1	0	1		2	8	0	10	1	0	50	2	1	1	1	0	1	1		2	1	1	2	300
Pope			1	2	0	1		1	6	0	8	0	0	20	0	1	0	0	0	1	1		1	0	1	0	0
Pleasant Grove																											
Red Hill			2	1	0	1		0	6	0	30	0	0	0	1	0	0	0	0	0	0		1	0	3	2	150
Sardis *			2	0	0	1		0	10	0	16	1	0	70	2	4	1	0	1	1	1		4	0	2	4	500
Sardis Lake			1	2	0	1		1	8	0	9	0	0	50	1	1	1	0	0	1	1		0	1	0	0	100
Union			2	1	0	2		0	4	0	6	0	0	0	0	1	0	0	0	1	1		0	0	1	1	100
Total			24	17	1	13		11	133	4	170	4	1	340	14	22	7	1	4	16	15		20	8	21	27	3250

\* Denotes Municipal Fire Departments

## Panola County Fire Services

### Resources List (2 of 2)

DEPARTMENT	Rescue	Apparatus	ATVs	Boat	Hyd. Spreader	Hyd. Cutter	Hyd. Rams	K 12 Saws	Chain Saws	Cribbing	Air Bags	Air Chisels	Oxy/ acc. Torch	Sawzalls	Tool sets	Extended stabilizers	Rope/repelling equip.	Confined space blower	Tac Sticks	AEDs	Communications	Base radios	MobileRadios	Portable Radios	Cell phones	Satalite Radio
Batesville *		1	1	1	3	2	3	2	2	1	4	2	1	3	1	2	1	2	4	2		3		X	4	0
Bynum		1	0	0	0	0	0	1	2	0	0	1		1	1	0	0	0	0	1		1	10	30	0	0
Coles Point		1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1		1	8	16	0	0
Como *		1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1		0	4	15	0	0
Courtland *		1	0	0	1	1	0	0	2	1	0	0	0	1	1	0	0	0	0	2		2	5	16	0	0
Crenshaw		1	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	1		1	4	30	0	0
Curtis-Lock Station		1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0		0	7	20	0	0
Mt. Olivet		1	0	0	2	2	2	0	1	1	0	1	0	1	1	0	0	0	0	1		1	7	15	0	0
Pope #14		1	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	1		1	10	20	0	0
Pleasant Grove																										
Red Hill		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0		0	1	16	0	0
Sardis *		1	1	1	2	2	2	1	2	1	0	1	1	2	4	0	1	0	0	0		1	12	14	0	0
Sardis Lake		0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1		1	8	25	0	0
Union		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0		1	4	10	0	0
Total		11	2	2	8	7	7	5	16	4	4	5	2	10	13	2	2	2	4	11		13	80	227	4	0

\* Denotes Municipal Fire Departments

## Panola County Fire Services

### Capabilities List (1 of 1)

DEPARTMENT	FIRES			Structural	Residential	Small Commercial	Large Commercial	Industrial	Vehicle	Passenger type	Trucks, Buses & Transport	RESCUE	Vehicle	Light (Hand tools, pry bars)	Medium (Hydraulic)	Heavy (hydraulic, airbags, ext. stabiliza	SPECIALTY	Trench	High angle	Confined Space	Swift water	Urban	Haz Mat (A,B,C,D)
	Wildland	Small (less than 10 acres)	Medium (10 to 25 acres)																				
Batesville *		X			X	X	X			X	X			X	X	X		X	X	X	X	X	A
Bynum		X			X					X	X			X									
Coles Point		X			X					X	X			X									
Como *		X			X					X	X			X									
Courtland *		X			X					X	X			X	X								
Crenshaw		X			X	X				X				X									
Curtis-Lock Station		X			X					X				X									
Mt. Olivet		X			X					X	X			X	X								
Pope		X			X					X	X			X									
Pleasant Grove		X			X					X				X									
Red Hill		X			X					X				X									
Sardis *		X			X	X				X	X			X	X				X				
Sardis Lake		X			X					X	X			X									
Union		X			X					X				X									

\* Denotes Municipal Fire Departments

## **Mitigation Projects and Structure Ignitability Recommendations**

This section contains recommendations that the county and its homeowners can take to reduce the ignitability of homes and other structures in the WUI. Upon completion of the base map and risk assessment, it was determined that several areas within the county need improving in order to reduce the risk to wildfire. A list of prioritized recommendations for fuel treatment projects, along with preferred treatment methods for those projects (e.g. removal or reduction in fuel load, public awareness campaigns), were developed. They can be used to improve emergency preparedness and fire response capability in the county.

Recommendations were developed to educate homeowners of the steps they can take to reduce the ignitability of their homes. Because the primary focus of this plan is on projects that directly protect the county and its essential infrastructure, projects involving residential areas such as neighborhoods will be limited to community outreach and education programs. The recommendations outlined on the following page, which are available through the Fire Wise Program ([www.firewise.org](http://www.firewise.org)), describe actions property owners can take to protect their homes and property from wildfire.

**Table 4: Structure Ignitability Recommendations**

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***Homeowners / Landowners***

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- Use construction materials that are fire-resistant or non-combustible when possible.
- Keep your gutters, eaves, and roof clear of leaves and other debris.
- Clear dead wood and dense vegetation within at least 30 feet from your house.
- Move firewood away from your house or attachments like fences or decks.
- Prune all trees 6 to 10 feet from the ground.
- Water and maintain your lawn regularly.
- Mow dry grass and weeds.
- Dispose of cuttings and debris promptly.
- Carefully space the trees you plant.
- Provide at least 30 feet clearing around your home.
- Prevent combustible materials and debris from accumulating under decks and porches.
- Use 1/8" mesh wire to prevent sparks from entering your home through vents.

---

***County***

---

- Develop a homeowner education program to inform the general public.
  - Establish building codes that comply with Firewise guidelines.
  - Perform homeowner assessments to identify ways to create defensible space.
  - Partner with the Mississippi Forestry Commission to work with large, private landowners in order to identify areas with standing dead trees and then remove them and / or create fire breaks.
- 

*Source:* Firewise Communities, Panola County Strategy Committee

A recommendation was also made to establish a minimum distance between structures to reduce the vulnerability to wildfires. These include the following:

1. Maintain minimum distance between structures as recommended by the National Fire Protection Association.
2. Maintain a radius of at least 45 feet from outside edge of dead-end turnaround circles to provide for emergency vehicles on both surface and ditch and curb / gutter roadways.
3. Maintain minimal width standards for subdivision roads and access roads to individual homes per pending subdivision regulations.
  - Minimum width of surface ditch roadway with local designation (28 feet).
  - Minimum width of surface ditch roadway with collector designation (34 feet)
  - Minimum width of curb and gutter streets with local designation (27 feet).
  - Minimum width of curb and gutter streets with collector designation (33 ft).

## Action Plan and Assessment Strategy

The action plan is a central component of the Panola County Wildfire Protection Plan. It describes actions that will be taken to carry out the goals and objectives of the plan. Each mitigation action identifies the following:

- **Mitigation Action:** Identifies a specific action that can reduce vulnerability to wildfires.
- **Responsibility:** Identifies the agency responsible for carrying out the action.
- **Funding Source:** Identifies potential funding sources to accomplish the action.
- **Cost to Implement:** Identifies the amount of funds needed to accomplish the action.
- **Timeline:** Identifies the amount of time necessary to complete the proposed action.
- **Expected Outcome:** Identifies the result of implementing an action.
- **Assessment Timetable:** Identifies the amount of time necessary to complete an action.

**Action 1:** Increase emergency preparedness and capability by purchasing critical equipment (e.g. brush truck, wildland protection gear, and other supplies).

**Responsibility:** Panola County Emergency Management Agency, Local Fire Departments, County and Municipal Government

**Funding Source:** Homeland Security

**Cost to Implement:** \$200,000

**Timeline:** 3 years (or as grants become available)

**Expected Outcome:** Improved firefighting capability

**Assessment Timetable:** Review progress annually



**Action 2:** Establish quarterly meetings between the Mississippi Forestry Commission and the Panola County Fire Departments in order to improve communication, coordination, and collaboration.

**Responsibility:** Panola County Emergency Management Agency, the Mississippi Forestry Commission, and Local Fire Departments

**Funding Source:** N/A

**Cost to Implement:** N/A

**Timeline:** Implement Immediately

**Expected Outcome:** Improved wildland protection service, training, safety, and project management

**Assessment Timetable:** Review progress annually

**Action 3:** Create a community outreach and education program to educate citizens (i.e. adults and youth) about the importance of volunteer fire programs.

**Responsibility:** Panola County Emergency Management Agency, Mississippi Forestry Commission, Local Fire Departments

**Funding Source:** Homeland Security Fire Safety Grant

**Cost to Implement:** Cost depends on activity

**Timeline:** Immediately (October 2008 Fire Prevention Month)

**Expected Outcome:** Increased recruitment and retention among local fire departments

**Assessment Timetable:** Review progress annually

**Action 4:** Create a community outreach and education program to teach homeowners and communities how to reduce the ignitability potential of structures throughout the area.

Responsibility: Panola County Emergency Management Agency, Mississippi Forestry Commission, Local Fire Departments

Funding Source: Homeland Security Fire Safety Grant

Cost to Implement: Cost depends on activity

Timeline: Immediately (October 2008 Fire Prevention Month)

Expected Outcome: Increased homeowner awareness, decreased non-compliant residential burns, and loss of life and property

Assessment Timetable: Review progress annually

**Action 5:** Adopt and implement building codes, subdivision regulations, land use planning, and zoning ordinances that reduce the vulnerability of structures and other critical infrastructure throughout the county.

Responsibility: Panola County Board of Supervisors / Board of Aldermen

Funding Source: N/A

Cost to Implement: N/A

Timeline: 3 years

Expected Outcome: Implemented building codes and county ordinances will reduce loss of life, property, and critical infrastructure in the county

Assessment Timetable: Review annually to determine if changes are necessary

Action 6: Maintain, update, and redistribute copies of the CWPP to all county departments, fire stations, and other organizations that utilize the document.

Responsibility: Panola County Emergency Management Agency and North Delta Planning and Development District

Funding Source: N/A

Cost to Implement: N/A

Timeline: Annually

Expected Outcome: Increased awareness of fire related activities resulting in the implementation of action plan that will reduce the loss of life, property, and critical infrastructure in the county

Assessment Timetable: Review annually to determine if changes are necessary

Action 7: Identify private ponds in each fire district of the county to supply additional water during the event of wildfires.

Responsibility: Panola County Emergency Management Agency

Funding Source: General Fund, Grant

Cost to Implement: \$2,000

Timeline: 2 years

Expected Outcome: Increased fire protection services

Assessment Timetable: Review progress annually

Action 8: Create, maintain, and update a grants database / funding list included in the CWPP.

Responsibility: Panola County Emergency Management Agency, Local Fire Departments, and North Delta Planning & Development District

Funding Source: N/A

Cost to Implement: N/A

Timeline: Annually

Expected Outcome: Additional grant applications will result in an increase of grant funds

Assessment Timetable: Review progress annually

Action 9: Improve reporting standards and requirements in order to obtain a better understanding of fire activity at a local level.

Responsibility: Local Fire Departments

Funding Source: N/A

Cost to Implement: N/A

Timeline: Annually

Expected Outcome: Improved reporting accuracy will result in greater understanding of fire causes, trends, and patterns, which are useful for developing specific fire prevention strategies and techniques

Assessment Timetable: Review progress annually

## Potential Funding Sources

1. Assistance to Firefighters Grant Program  
Website: [www.firegrantsupport.com](http://www.firegrantsupport.com)  
Application Deadline: Spring 2009  
Program Description: Funding for training, equipment, vehicles, firefighter health and safety program and operations.
2. Fire Prevention and Safety Grant Program  
Website: [www.firegrantssupport.com](http://www.firegrantssupport.com)  
Application Deadline: Fall 2009  
Program Description: Outreach to high risk target groups including children, seniors, and firefighters. Monitor website for further information on eligible activities.
3. Staffing for Adequate Fire and Emergency Response Grant Program  
Website: [www.firegrantssupport.com](http://www.firegrantssupport.com)  
Application Deadline: Summer 2009  
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.ruraldev.usda.gov](http://www.ruraldev.usda.gov)  
Application Deadline: Contact local USDA representative  
Program Description: Funding for assistance in developing an essential community facility, such as a fire department, police station, or multi-purpose community facility. Funds can be used to construct, enlarge, or improve community facilities for healthcare, public safety, and community and public services.
5. U.S. Smokeless Tobacco Company Polaris Ranger Donation Program  
Website: [www.ustinc.com](http://www.ustinc.com)  
Application Deadline:  
Program Description: Donation of Polaris Ranger 6X6 utility vehicles for firefighting, rescue, police, emergency medical service, and wildlife law enforcement organizations.
6. Fire Responder Institute Website  
Website: [www.firstresponder.org](http://www.firstresponder.org)  
Application Deadline: N/A  
Program Description: Provide support to local fire departments and emergency service personnel.
7. Responder Knowledge Base Website  
Website: [www.rkb.mipt.org](http://www.rkb.mipt.org)  
Application Deadline: N/A

Program Description: Website contains information on currently available products, standards, training, and grants.

8. Grants Office

Website: [www.grantsoffice.com](http://www.grantsoffice.com)

Application Deadline: N/A

Program Description: Provides information, tools, and tips to help local fire departments be more successful at obtaining funds from the Assistance to Firefighters Grant Program.

## References

- Mississippi Forestry Commission, Fire Data Sets Fiscal Years 2002 - 2007
- Preparing a Community Wildfire Protection Plan: A Handbook for Wildland Urban interface Communities, March 2004
- Panola County Emergency Management Agency: Resources and Capabilities Lists
- Panola County Hazard Mitigation Plan, November 2006
- Panola County Fire Departments
- Mississippi Ratings Bureau: Municipal and Fire Legal District Protection Fire Insurance Grading, 2008
- Firewise Communities: [www.firewise.org](http://www.firewise.org)
- USDA Forest Service
- National Fire Plan, August 2000
- National Fire Protection Association: [www.nfpa.org](http://www.nfpa.org)
- Weather Data: [www.city-data.com](http://www.city-data.com) and [www.weatherbase.com](http://www.weatherbase.com)

## County Wildfire Protection Plan Strategy Committee

The Panola County Wildfire Protection Plan is the result of a collaborative effort between various agencies. The representatives listed below comprise the core decision-making team responsible for this report.

**Table 4: Steering Committee**

<b>Name</b>	<b>Organization</b>	<b>Address</b>	<b>Telephone #</b>
Daniel Cole	Panola Co. Emergency Management Agency	705 – A Keating Road Batesville, MS 38606	(662) 563-6245
George Byrd	Mississippi Forestry Commission	1801 Highway 51 Elliott, MS 38926	(662) 226-3321
Gary Thompson	Panola County Board of Supervisors	1 Public Square Batesville, MS 38606	(662) 563-6200
Tim Taylor	Batesville Fire Department	105 College Street Batesville, MS 38606	(662) 563-4703
Justin Maples	Courtland Fire Department	536 Main Street Courtland, MS 38620	(662) 563-7076
John Havas	Sardis Lower Lake Fire Department	28521 Highway 35 Sardis, MS 38666	(662) 563-1750
Author Biggers	Mount Olivet Fire Department	6507 Mt. Olivet Road Batesville, MS 38606	(662) 563-4211

*Source:* North Delta Planning & Development District, Inc.



## **Project Contact Information**

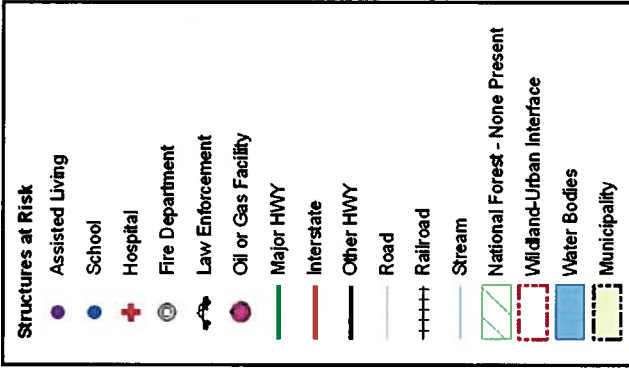
**Panola County Emergency Management Agency**  
705-A Keating Road / Post Office Box 86  
Batesville, MS 38606  
Phone: (662) 563-6245  
Fax: (662) 563-6227

**Mississippi Forestry Commission**  
477 South Gate Road  
Hattiesburg, Mississippi 39401  
Phone: (601) 942-1114  
Fax: (601) 450-1609

**North Delta Planning & Development District**  
220 Power Drive / Post Office Box 1488  
Batesville, Mississippi 38606  
Phone: (662) 561-4100  
Fax: (662) 561-4112

# Panola County, Mississippi

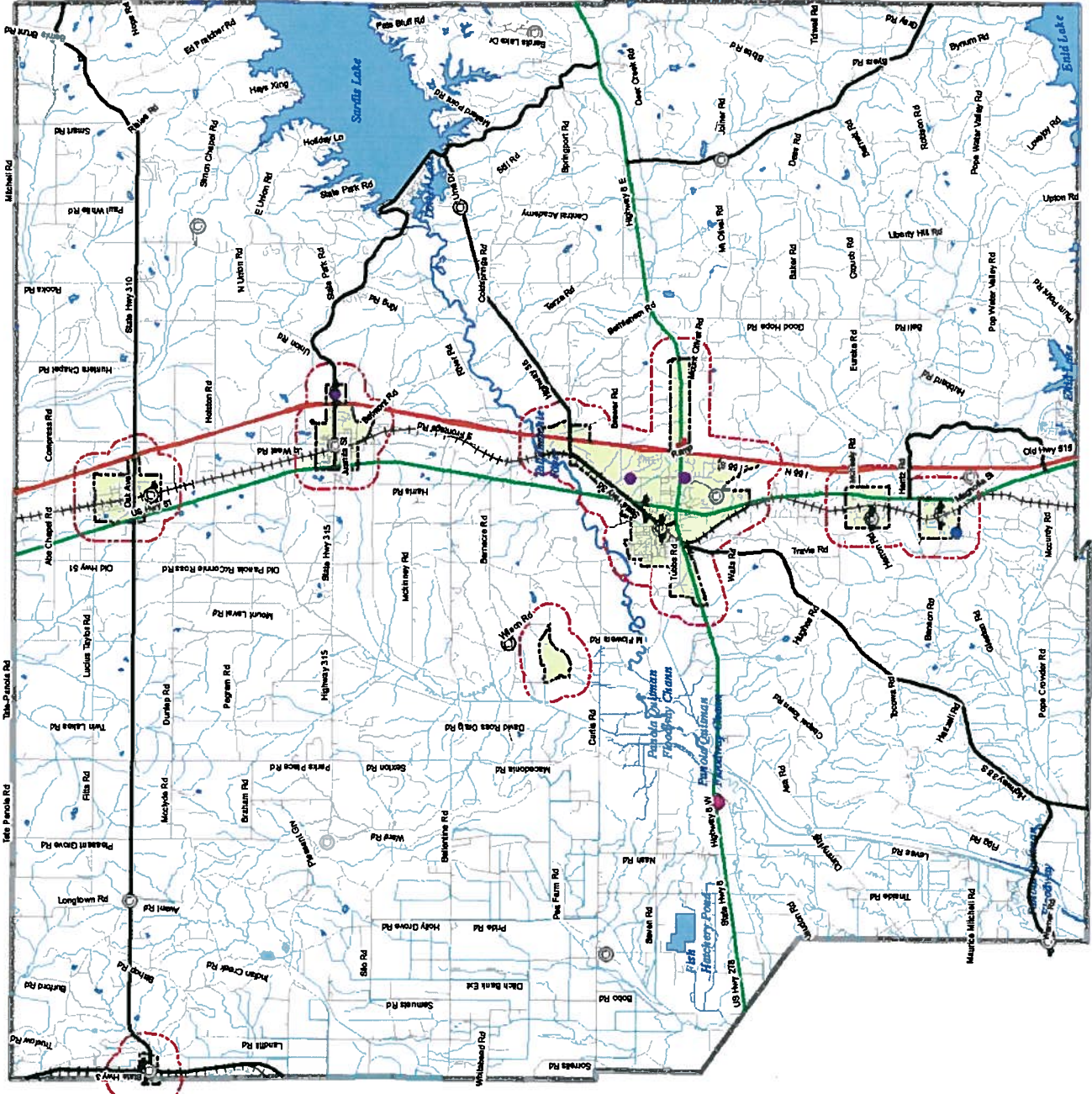
## Base Map



Prepared By:

**CMPDD**

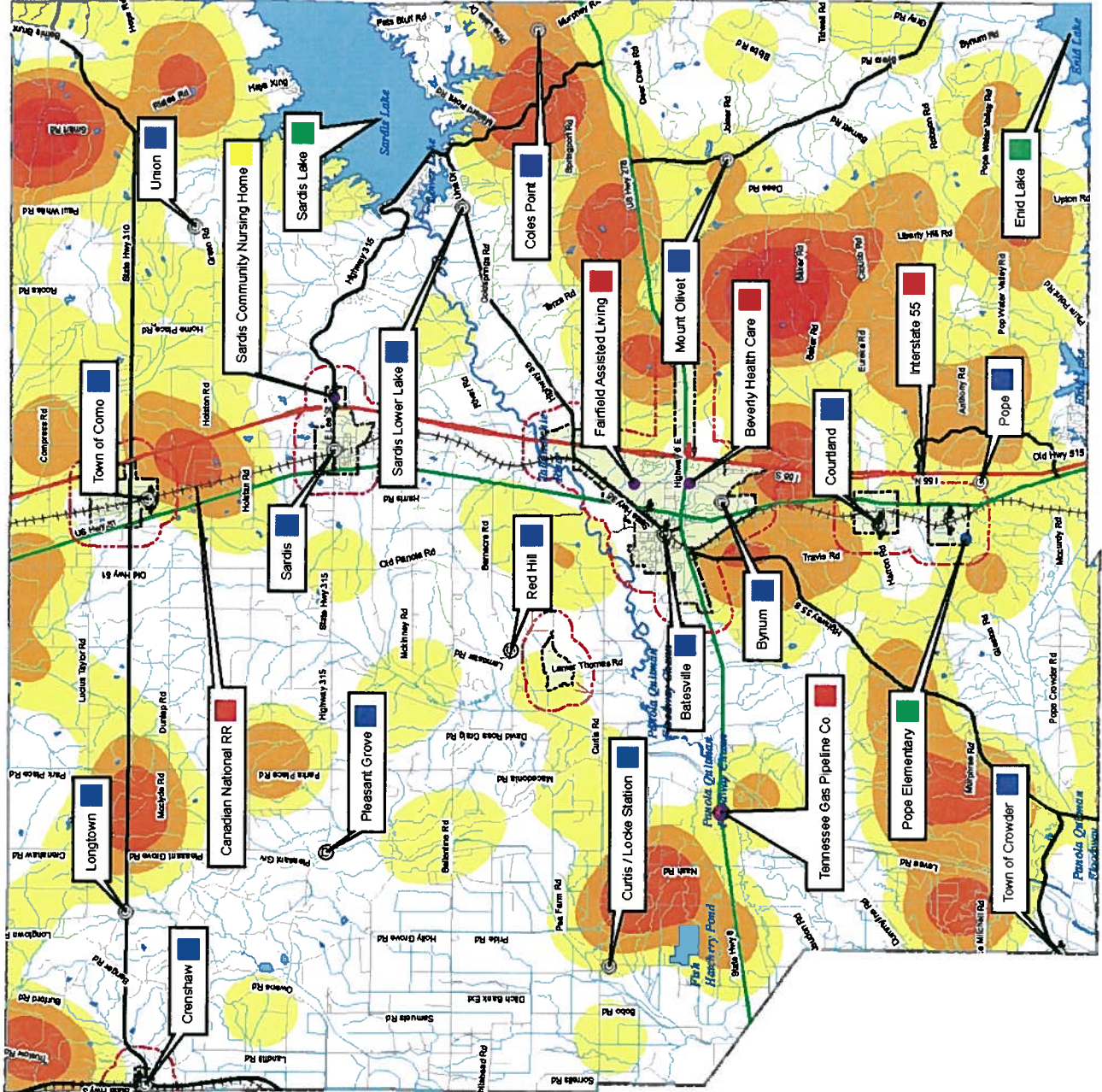
Central Mississippi  
Planning & Development District





# Panola County, Mississippi

## Risk Assessment Ratings



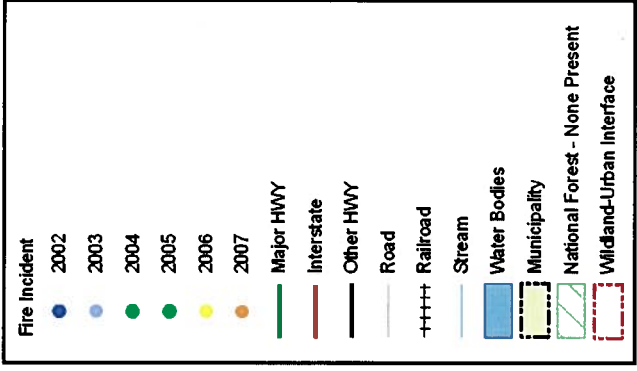
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●	School	■	2
+	Hospital	■	3
⊕	Fire Department	■	4
⊕	Law Enforcement	—	Major HWY
⊕	Oil or Gas Facility	—	Interstate
⊕	High Concentration	—	Other HWY
⊕	Medium Concentration	—	Road
⊕	Moderate Concentration	—	Railroad
⊕	Low Concentration	—	Stream
⊕	Other	—	Water Bodies
⊕	National Forest - None Present	—	Municipality
⊕	Wildland-Urban Interface	—	



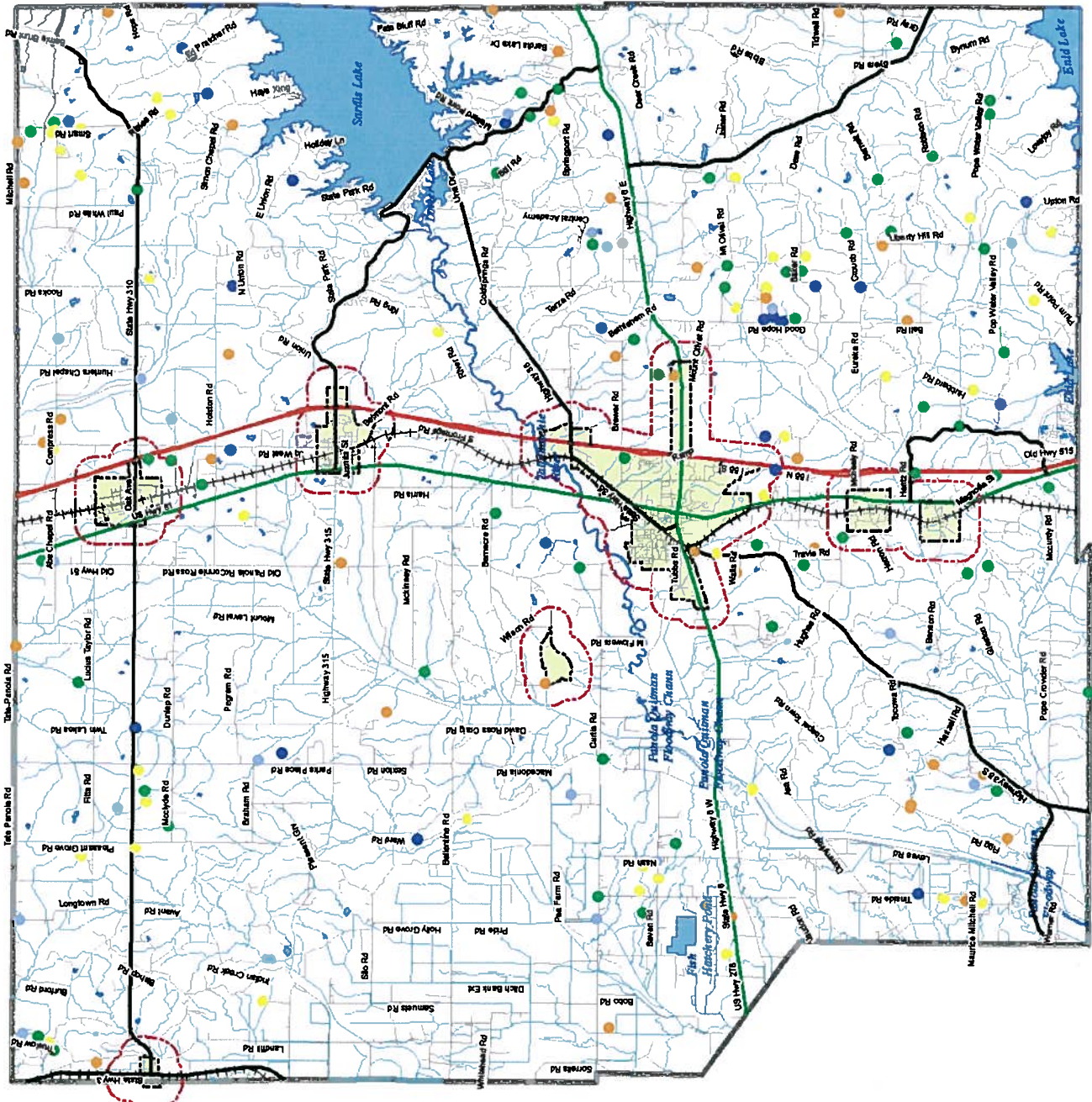
Prepared By:  
**CMPDD**  
 Central Mississippi  
 Planning & Development District



# Panola County, Mississippi County Wildfire Protection Plan Fires by Fiscal Year 2002 - 2007



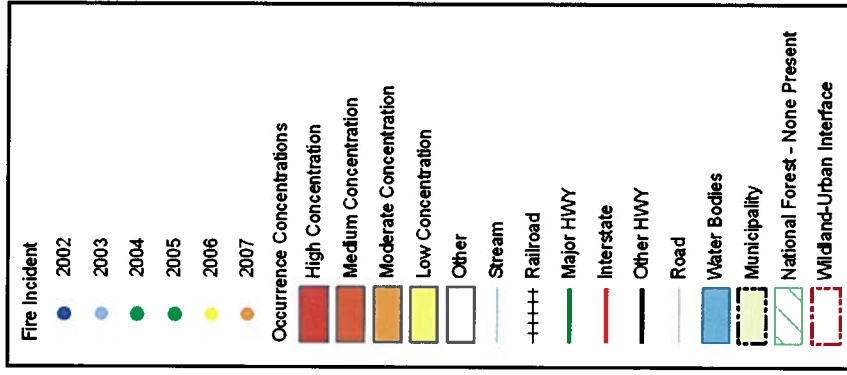
Prepared By:  
**CMPDD**  
Central Mississippi  
Planning & Development District





# Panola County, Mississippi:

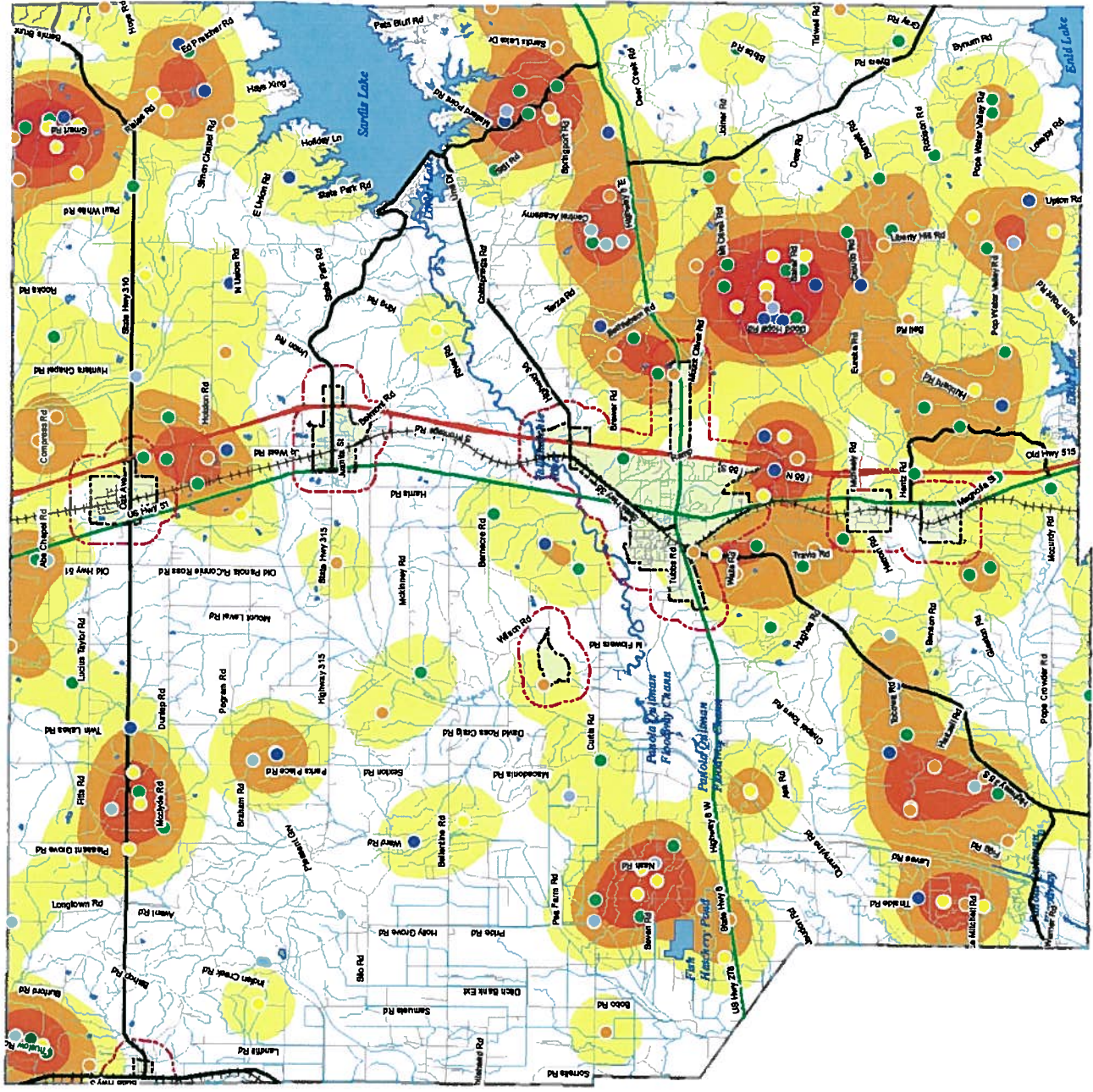
## High Occurrence Wildfire Areas



Prepared By:

**CMPDD**

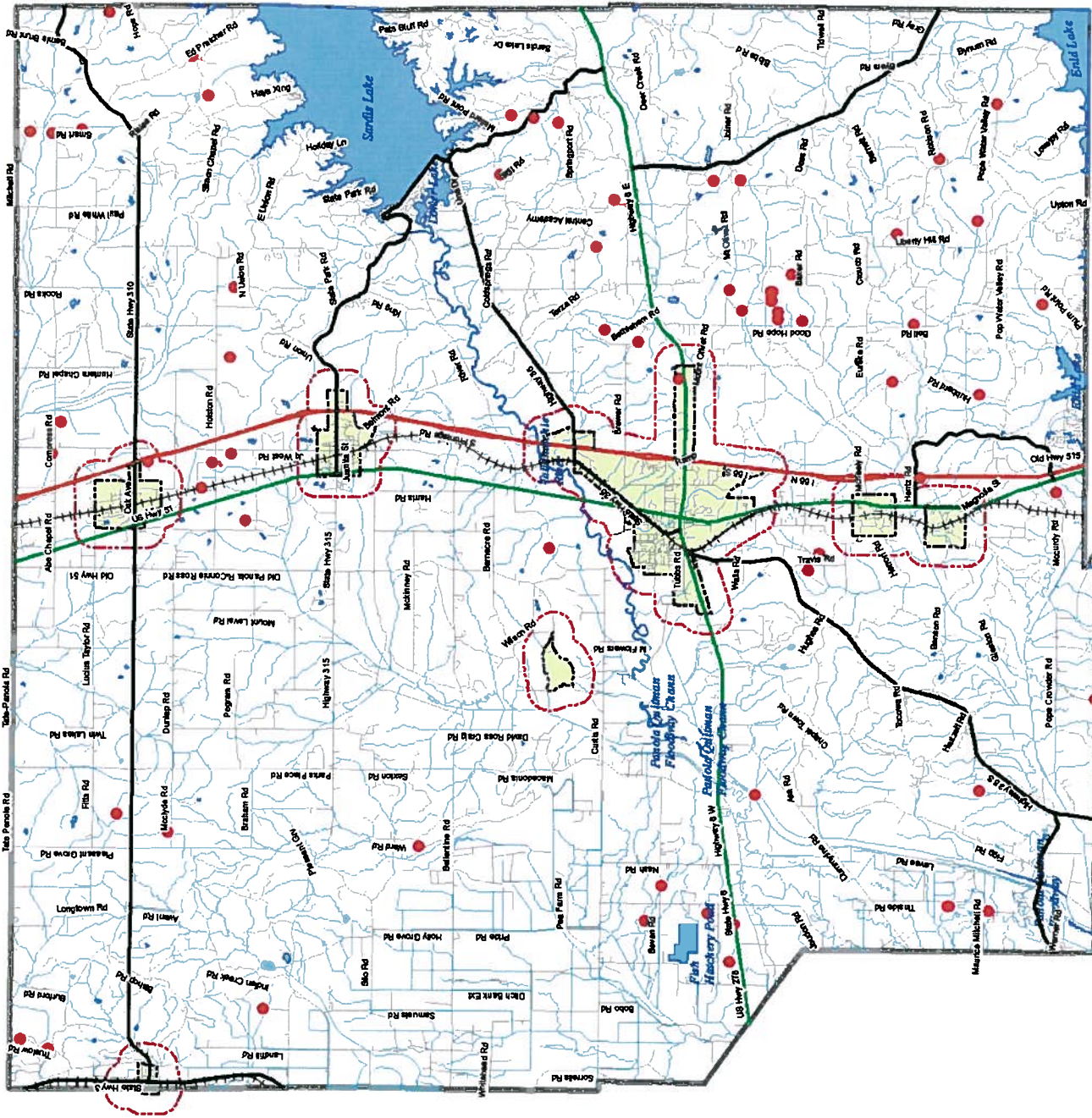
Central Mississippi  
Planning & Development District





# Panola County, Mississippi

## Arson Fires 2002 - 2007



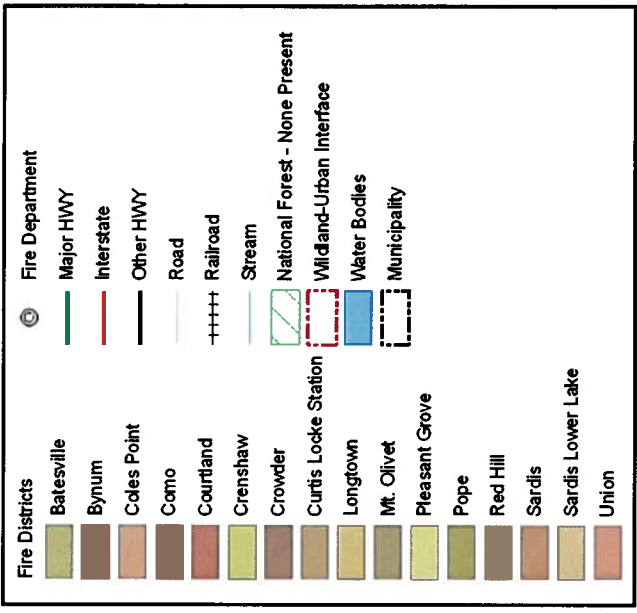
Prepared By:

**CMPDD**

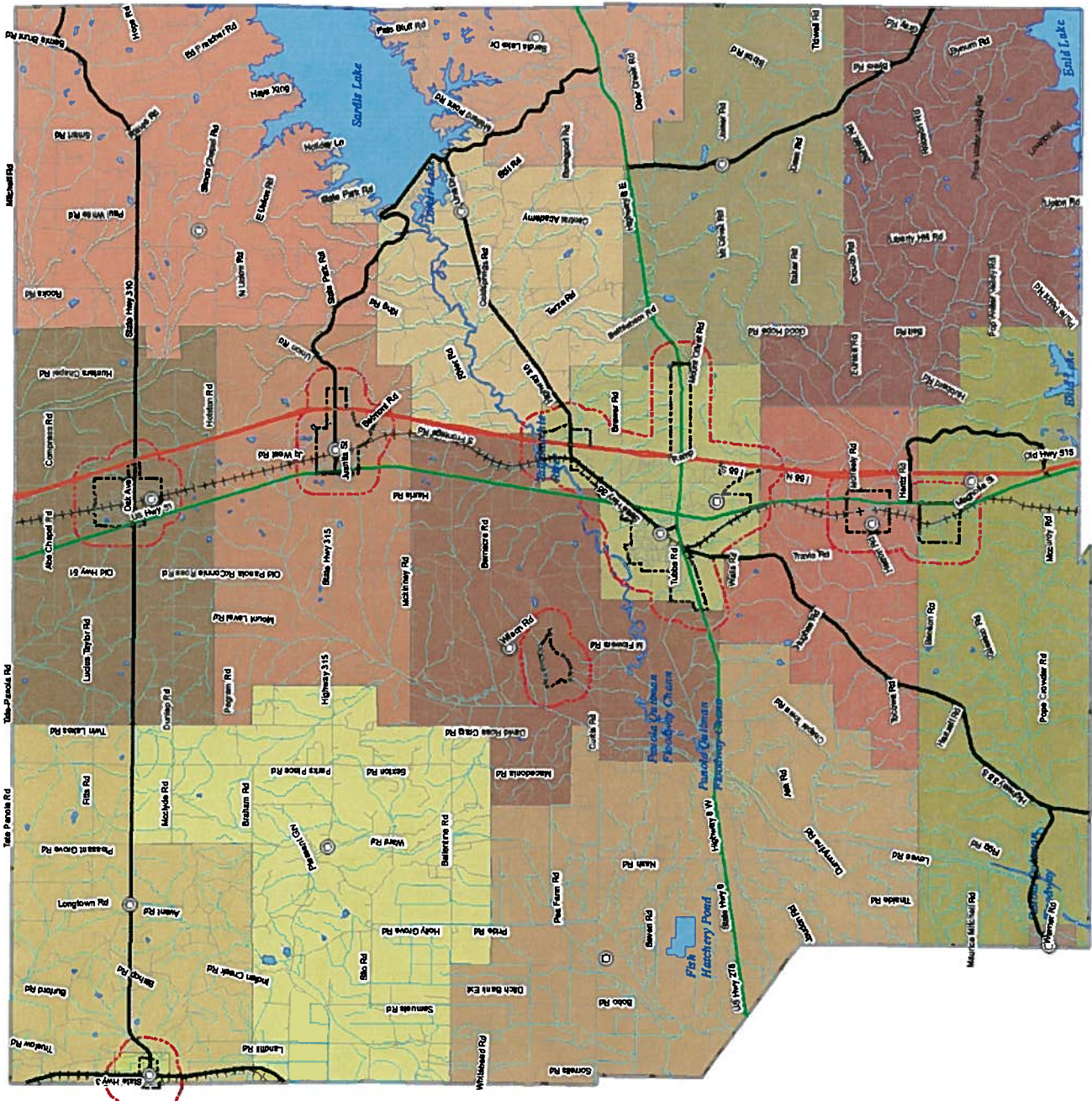
Central Mississippi  
Planning & Development District



# Panola County, Mississippi Fire Response Areas

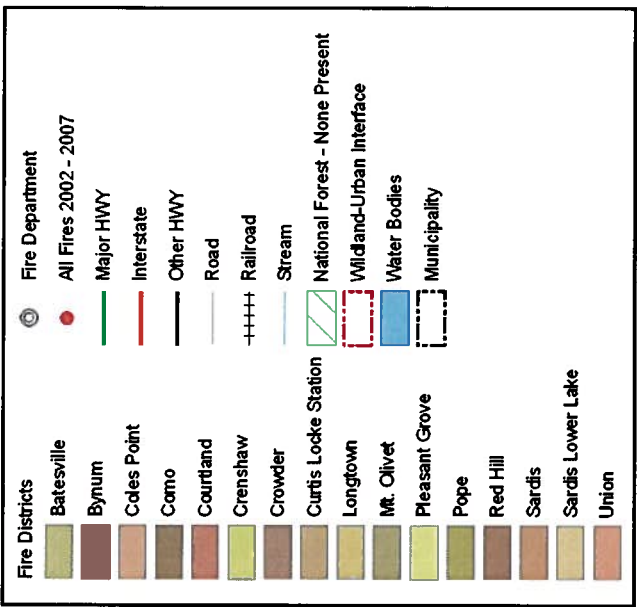


Prepared By:  
**CMPDD**  
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Planning & Development District





# Panola County, Mississippi Wildfires by Response Area 2002 - 2007



Prepared By:  
**CMPDD**  
Central Mississippi  
Planning & Development District

