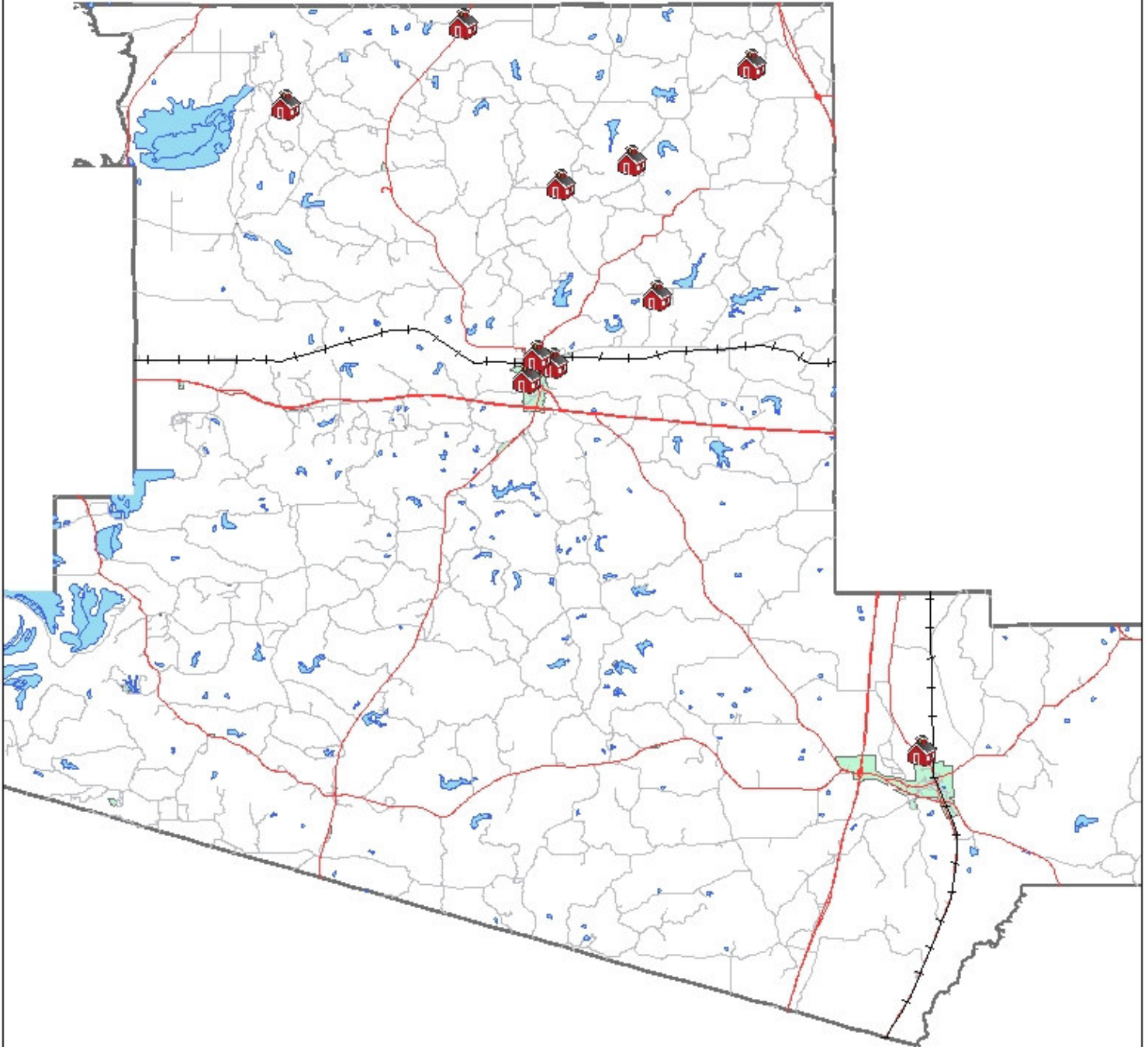


CARROLL COUNTY, MISSISSIPPI

COUNTY WILDFIRE PROTECTION PLAN



SEPTEMBER 2008

PREPARED BY NORTH CENTRAL PLANNING AND DEVELOPMENT DISTRICT WITH FUNDING PROVIDED BY THE MISSISSIPPI FORESTRY COMMISSION AND THE NATURE CONSERVANCY

Prepared by North Central Planning and Development District
711 S. Applegate St.
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The following report is a collaborative effort among various entities. The representatives listed below comprise the core development team responsible for this report and mutually agree on the plan's contents:

Bobby Grantham
Carroll County Emergency Management Director

Lloyd "Honey" Ashmore
President
Carroll County Board of Supervisors

Jim Strong – County Forester
Mississippi Forestry Commission

George Byrd –
North Mississippi Public Outreach Forester
Mississippi Forestry Commission

The following county, state and federal agencies and other interested parties were consulted and involved for the preparation of this report::

Carroll County Board of Supervisors

Carroll County Emergency Management Director

Carroll County Fire Department

Mississippi Forestry Commission

U.S. Department of Agriculture Forestry Service

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I. STRATEGIC GOALS

The objective of the following report is to set clear priorities for the implementation of wildfire mitigation in Carroll County. This includes prioritized recommendations as to the appropriate types and methods of fuel reduction and structure ignitability reduction that will protect this community and its essential infrastructure. It also includes a plan for wildfire suppression, identifies existing resources, describes how to maximize resources, outlines additional resources needed, and presents options for creating sustainability.

With a goal of protecting the citizens, natural resources, properties, and infrastructure of Carroll County and surrounding communities from catastrophic wildfire, the Development Team has identified five mutual objectives for the CWPP. Although they are not all specifically referenced or included in the CWPP, they did influence plan development:

- Create a healthy and sustainable forest and protect communities by implementing forest treatments designed to reduce the threat of catastrophic wildfire.
- Engage the public by providing opportunities in preparedness and mitigation efforts.
- Support efforts to establish effective and sustainable methods to use small-diameter wood and other forest biomass.
- Promote FireWise building materials and construction techniques, as well as creation and maintenance of defensible properties and neighborhoods.
- Attract necessary funding (appropriations, contracts, donations, grants, etc.) to successfully reduce fire threat.

The Community Wildfire Protection Plan (CWPP), authorized by the Healthy Forests Restoration Act of 2003, is a strategic plan as well as an action plan for identifying community protection priorities, with a broad operating framework for all agencies and ownerships—private, municipal, county, state and federal—within the area.

Enacted in December 2003, the Healthy Forest Restoration Act (HFRA) requires development and approval of a CWPP by communities who wish to receive priority funding for implementation of forest treatments designed to reduce wildfire risks to their respective community.

II. COMMUNITY COLLABORATION – THE DEVELOPMENT TEAM

A Development Team convened in May of 2008 to assess risks and develop the Community Wildfire Protection Plan. The Development Team is comprised of representatives from local government, local fire authorities, and the state agency responsible for forest management.

Lloyd “Honey” Ashmore, President Carroll County Board of Supervisors

Bobby Grantham, Carroll County Emergency Management Director and Fire Coordinator

Jim Strong, Carroll County Forester, Mississippi Forestry Commission

III. COMMUNITY BACKGROUND AND EXISTING SITUATION

Area Description: Carroll County, with a population of 10,769, covers an area of about 628 square miles, or 470,500 acres, of which 280,000 acres or 70% are in forest.¹ The forestland is comprised of 21% pine, 66% hardwoods, and 13% mixed.

Interstate 55 links Carroll County with Jackson, Mississippi (95 miles to the south) and Memphis, Tennessee (about 115 miles to the north). U.S. Highway 82 and Mississippi State Highways 17, 35, and 304 also serve the area.

There are two county seats in Carroll County: Carrollton and Vaiden. The economy of the area is predominantly agricultural. Cotton, corn, soybeans and hay are the primary crops grown, with cotton being the main source of farm income. There is one major industry in Carroll County, Anel Corporation, which is situated off Highway 51, about 3.6 miles south of the City of Winona (Montgomery County). There are about 105 other non-farm employers in Carroll County.

There are approximately 4,988 housing units in Carroll County,² with about 85 percent of those homes occupied by owners. According to the 2000 Census, the average value of owner-occupied homes was \$57,800. In Carroll County, the terrain varies from the low areas in the western section to steep with narrow ridge tops and narrow valleys in the towns of Carrollton and North Carrollton.

Carroll County is part of the Upper East Gulf Plain Ecoregion, within the Big Black and Yazoo Rivers Water Basins.

Existing Situation: According to the Mississippi Forestry Commission, between July 1, 2005 and June 30, 2007, Carroll County had 116 wildland fires that burned 1,047 acres.

70 percent of Carroll County acreage is forested. Of the 280,000 acres of timber land, about 0.7% percent is publicly or corporately owned 81.6% is owned by private individuals and 10.6% by timber companies.

There are currently 8 fire stations in Carroll County. The Fire Districts are: Vaiden, Mt. Pisgah, Valley Hill, Gravel Hill, Black Hawk, Calvary, Hickory Grove, and Beat 4 - Highway 430.

There are no Zoning Ordinances or Comprehensive Land Use Ordinances in Carroll County. All jurisdictions are covered by a Comprehensive Emergency Operations Plan (EOP).

¹ 2000 Census Data, Carroll County (estimate for 2002).

² Ibid.

IV. MAP

Map # 1, Base Map

This map depicts the locations of facilities at risk from wildfires within the county. Included on this map is also the WUI, National Forest, Major roads, and incorporated communities within the county.

Map # 2, Fire Data by FY

This map depicts the locations of the fires for the FY 2002-2007 time period, color-coded by FY. Also shown on the map is the Wildland Urban Interface, National Forest, VFD station locations, major oil and gas transmission lines, major electric transmission lines and the incorporated communities within the county.

Map # 3, Arson Fires FY's 2002-2007

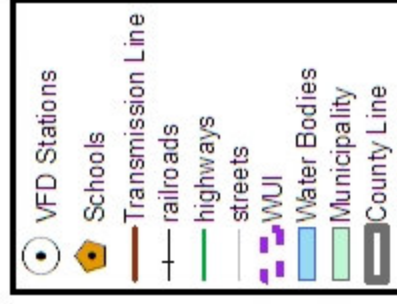
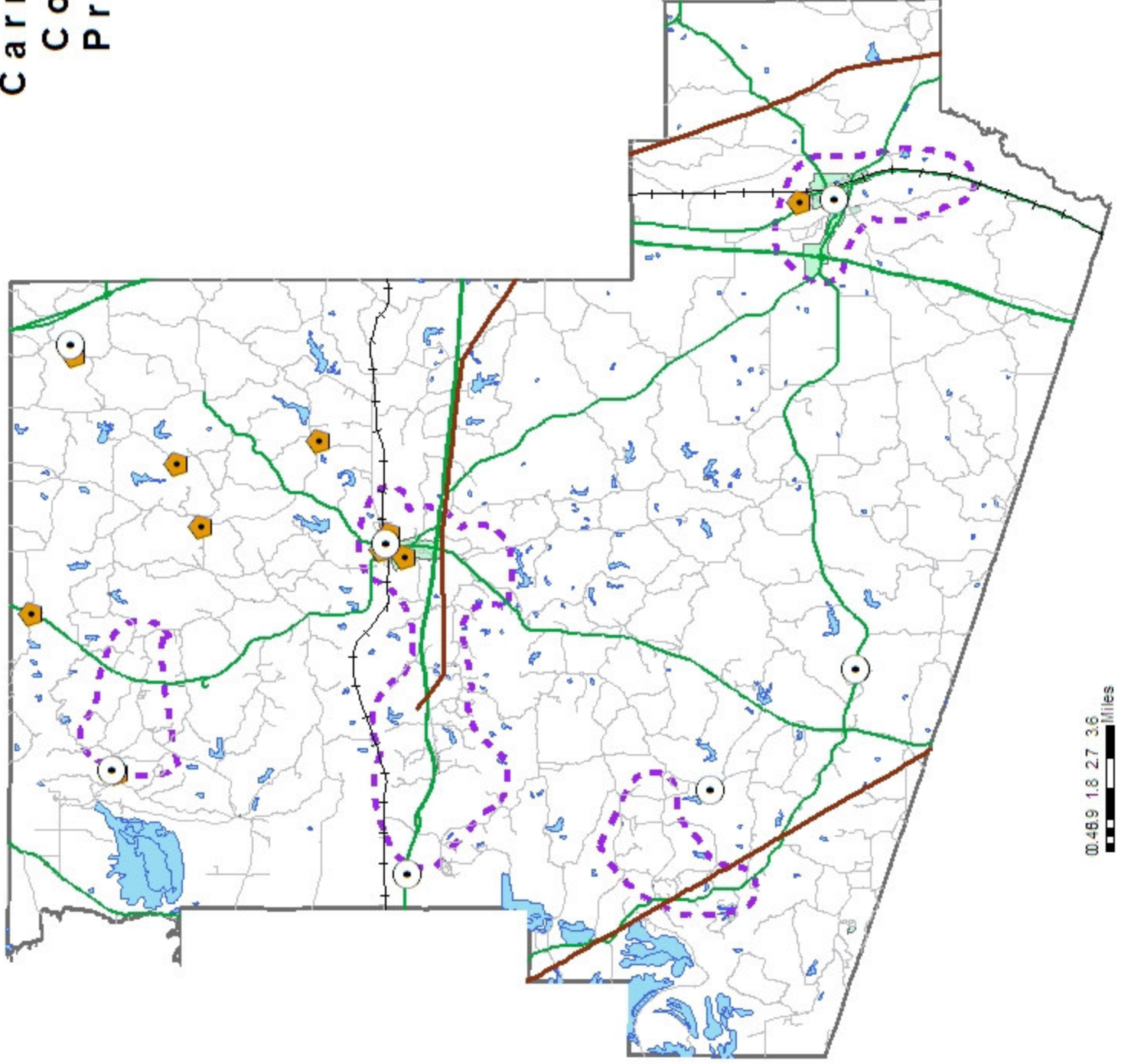
This map depicts the locations of the arson fires for the FY 2002-2007 time period. Also shown on the map is the Wildland Urban Interface, National Forest, VFD station locations and the incorporated communities within the county.

Map # 4, High Occurrence Wildfire Areas

This map depicts the locations of areas with a high occurrence of wildfires. Also shown on the map is the Wildland Urban Interface, National Forest, VFD station locations, major oil and gas transmission lines, major electric transmission lines and the incorporated communities within the county.

Carroll County, MS County Wildfire Protection Plan

Base Map



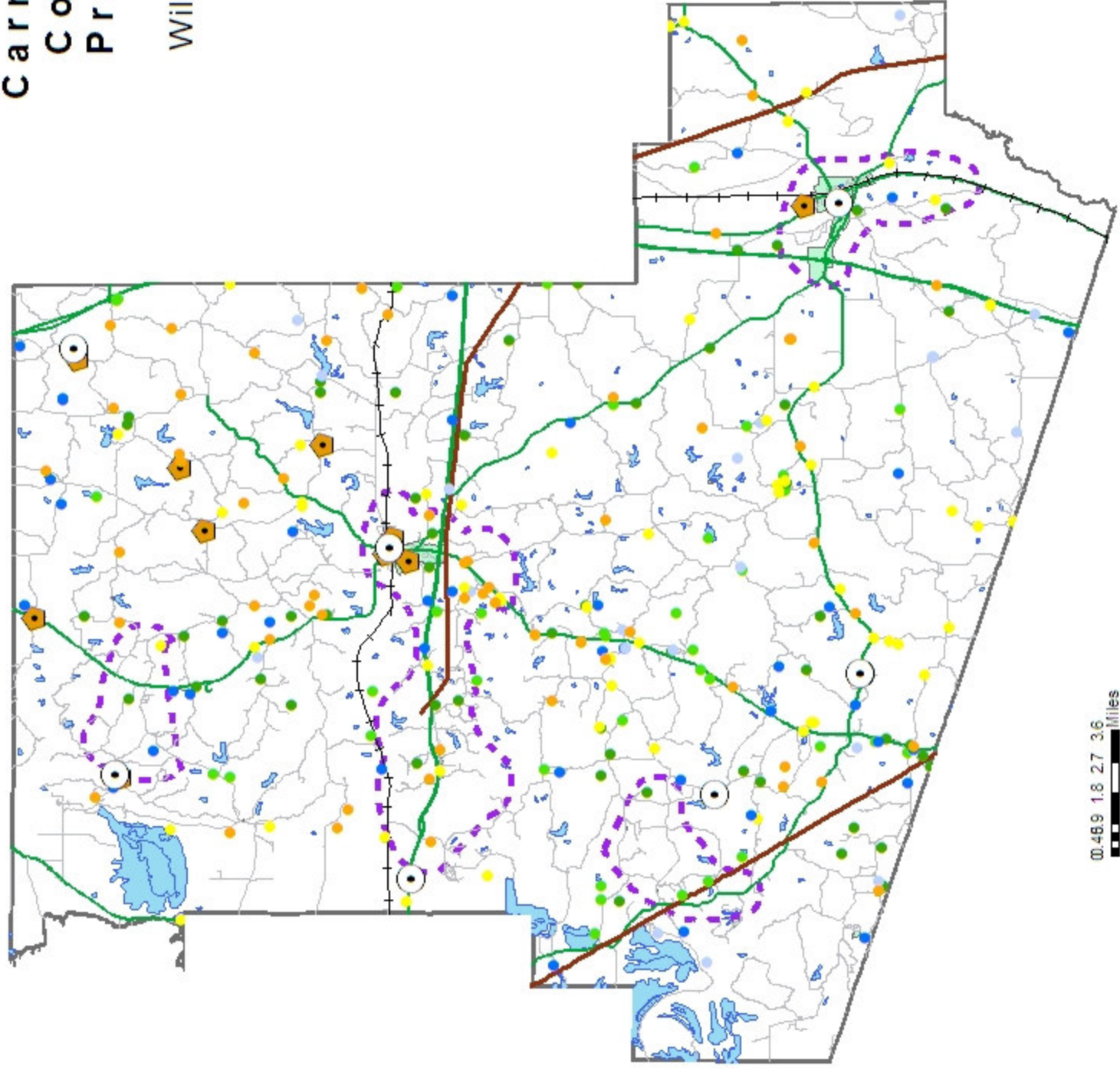
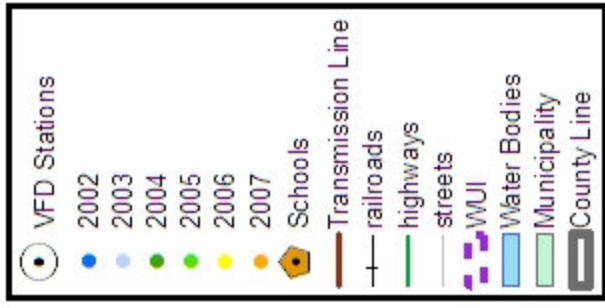
Prepared By:



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Carroll County, MS County Wildfire Protection Plan

Wildfires By Fiscal Years

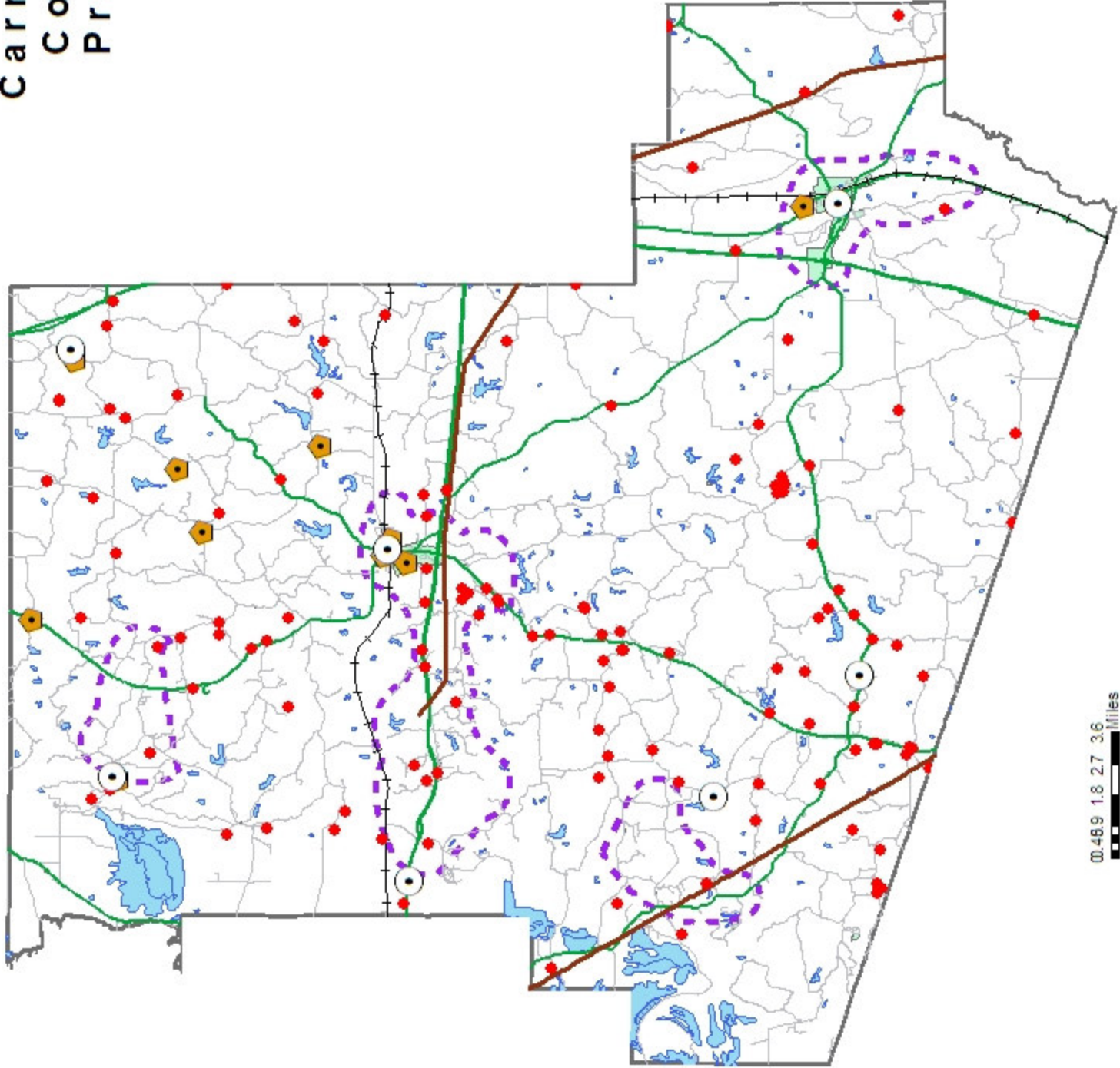
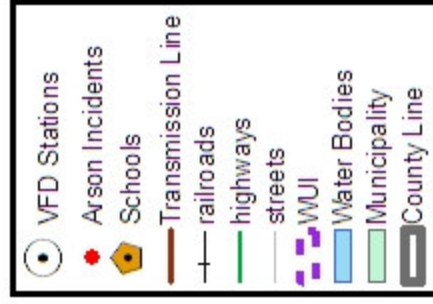


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Carroll County, MS County Wildfire Protection Plan

Arsons Fires
FYs 2002 -2007



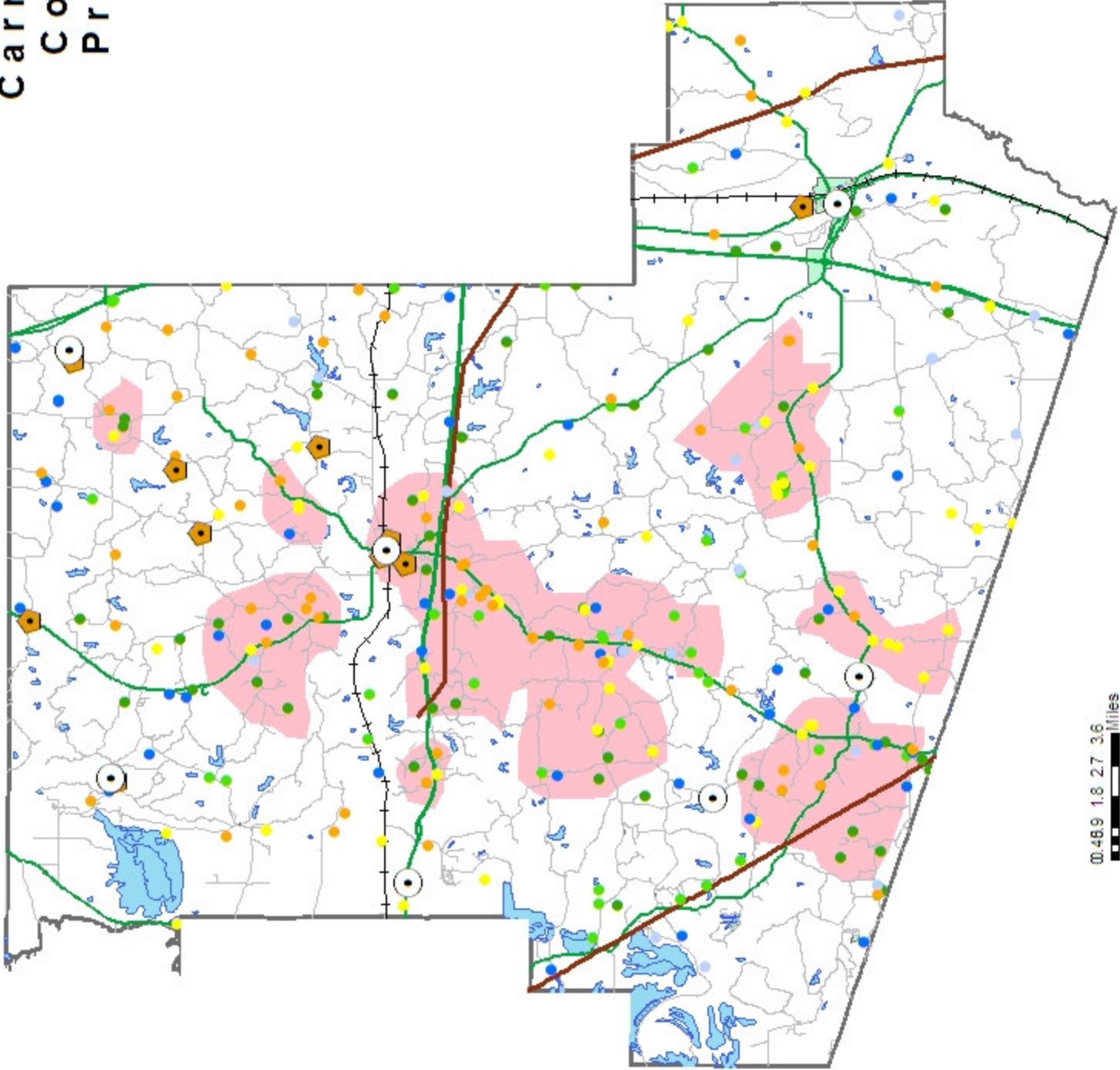
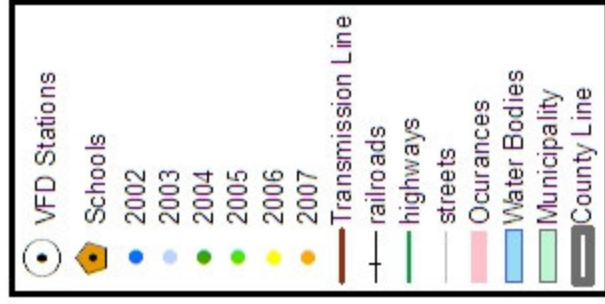
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Carroll County, MS County Wildfire Protection Plan

High Occurrences Wildfire Areas



Prepared By:



V. COMMUNITY WILDFIRE RISK ASSESSMENT

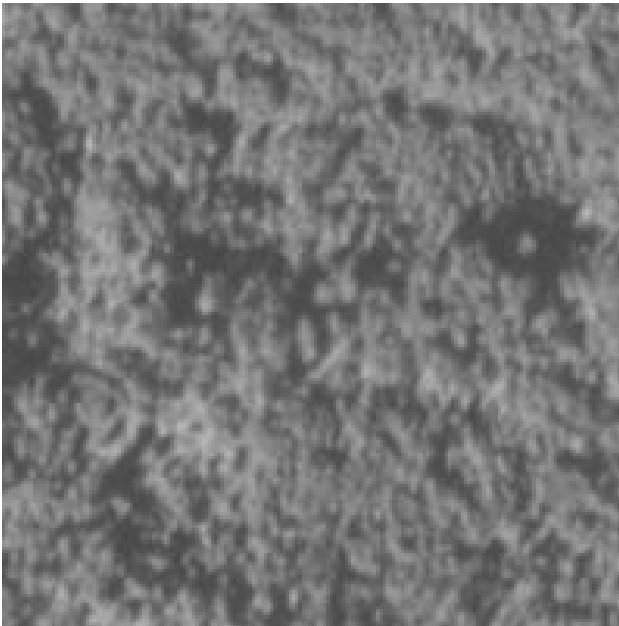
Executive Summary

Although wildfire is a natural and necessary event in a healthy forest ecosystem, during the past several decades land management practices and increasing societal demands have resulted in dangerous accumulations of fuels that threaten our forests and the adjacent at-risk communities.

In Carroll County, 280,000 acres, or 70% of the total land area are forested. The forest cover includes 21% pine, 66% hardwoods, and 13% mixed forest. According to the 2007 Southern Region Annual Fire Report, Mississippi forests, wildfire occurrence averages for both the Mississippi National Forests (MNF) and the Mississippi Forestry Commission (MFC) lands have increased steadily year after year due to dry fuel conditions.

Between July 1, 2005 and June 30, 2007, Carroll County ranked 40th in Mississippi for the number of fires (116 fires), with 1,047 acres burned.

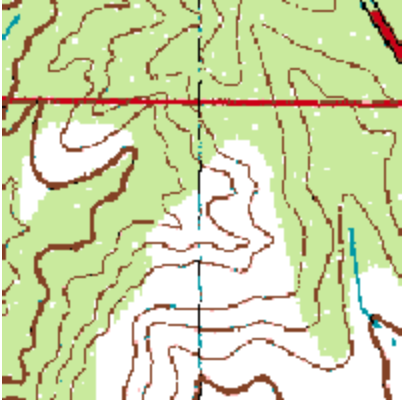
Three factors influence the spread of wildfire: **fuel**, **weather** and **topography**. Of these, only fuel can be managed to reduce the intensity and spread of wildfire.



Aerial Photo of Hwy. 35 shows dense canopy cover

Fuel: Carroll County is 70% covered in timberland. Natural fuel amounts have increased over the decades. Homes and other flammable structures are other sources of fuel.

Weather: Historically, Carroll County's prevailing wind patterns have spread fire from southwest to the northeast. Lower rainfall averages has greatly increased vegetation mortality, thus increasing fire potential.



Topography: Fires burn faster upslope than down. Carroll County’s narrow ridges and valleys funnel wind around Carrollton and North Carrollton. South facing slopes dry quicker and burn more readily. Steep slopes present challenges for treating hazardous fuels, thus reinforcing the need to treat adjacent, more easily accessible areas, in a more intensive manner and at a greater scale.

Topographical map of Hwy. 35 shows narrow ridges and valleys.

Priority Vulnerable Areas: The priority vulnerability area for wildfires is in the areas of urban interface around the population centers and in the unincorporated areas of Carroll County. Below is listed an inventory of Carroll County’s critical human infrastructure:

- Elementary / High Schools 6
- Health Clinics 1
- Police/Fire/EOC Facilities 13
- Residential homes 4,988 (approximate)
- Commercial and Government Bldgs. 212 (approximate)
- Water Storage Facilities 9

Social factors, such as poverty and disability were also considered in assessing the wildfire risk of Carroll County and its municipalities. Within the unincorporated areas of Carroll County, there are some areas of extreme poverty, where individual resources are extremely limited.

A total of 1,833 people in Carroll County lived below the poverty level according to the 2000 Census. A high number of those people (438) lived in the northeast portion of Carroll County. There were 3,908 adults between the ages of 21 and 64 in Carroll County who were considered disabled as of the 2000 Census. The northeast area (1,398 disabled adults), southeastern (681 disabled) and southwest (666 disabled) sections of Carroll County have a large number of disabled citizens. There are 2,677 people 65 years of age and older in Carroll County. The northeast portion of the county accounts for a large number of the elderly population, with 328 senior citizens living in that area.

Other than scattered mobile homes, there is currently very little new development in the county’s Urban/Wildland interface; however, there have been some infrastructure improvements in North Carrollton and Vaiden.

COMMUNITY VALUES AT RISK

Carroll County is dependent on a healthy forest for community well being. Catastrophic wildfire, fed by excessive fuel amounts, a lower-than-average annual rainfall, and insect infestations, threaten numerous community values. These values include scenic views, historical and cultural resources, emotional and spiritual attachments, watershed resources, wildlife habitat, old-growth forests, recreational opportunities, public health, firefighter safety, structures and other infrastructure, and public confidence in government. The shock of catastrophic fires to Carroll County’s local economy, citizens and ecosystem would be devastating.

Analysis Area

Areas to Be Evaluated	Location	Community Type
Thunderbird Ranch Carroll County Sports Complex Spring Lake Seven Pines Teoc Community House	Harmony Road North Carrollton Valley-Williams Road Hwy. 7 Carrollton	Residential Public Recreation Residential Residential Unincorporated Area Public Building
Centerville Subdivision Strawberry Hill McCarley Blackhawk	Airport Area North of Hwy. 82	Residential Residential Unincorporated Area Unincorporated Area
Coila Highway/Interstate Rights-of-way Carroll County Courthouse Vaiden Town Hall North Carrollton Town Hall	I-55, Hwy. 82, Hwy. 35, Hwy. 7 Carrollton & Vaiden Vaiden North Carrollton	Unincorporated Area Major Transportation Routes Government Buildings Government Building Government Building
McDaniel Tree Farm Glen Miller Tree Farm Cedar Hill Ranch Red Mountain Timber Wesley Gee Estate	Off Centerville Road CR 75/Harmony Road CR 166 CR 146/144 Scattered	Timber Timber Timber Timber Timber
Plum Creek Hankins Timber D.V. Patrick Estate Dale Mann Estate	Scattered Scattered Scattered Scattered	Timber Timber Timber Timber

Fire History of Community and/or Adjacent Lands

Relative Frequency and Location	See attached hazards map.
Common Causes	<ol style="list-style-type: none"> 1. Trash burning 2. Dry conditions 3. Highly flammable species 4. High levels of fuel (Aftermath of Katrina, pine beetle infestations, etc.)
Values Lost	<ol style="list-style-type: none"> 1. Timber resources 2. Residential structures 3. Water quality 4. Soil productivity 5. Air quality 6. Wildlife habitat 7. Recreational resources
Availability of Resources	<ol style="list-style-type: none"> 1. No fire suppression equipment available through timber industry. 2. Carroll County has good working relationship with surrounding counties. 3. Mississippi Insurance Commission will provide \$70,000 for new fire truck at Blackhawk.
Factors Influencing Fire	<ol style="list-style-type: none"> 1. Dry pine straw 2. Dry grass 3. Some debris still left from Hurricane Katrina
Areas of Future Concern	<ol style="list-style-type: none"> 1. Centerville Subdivision near airport 2. Aeronautic and other industrial concerns at airport. Many use or store hazardous and highly flammable or explosive materials.

Community Preparedness and Protection Capability: Because Carroll County is dependent on an all-volunteer fire force, public involvement is critical to the control of wildfire. The county's response to a wildland fire is based on an evaluation of risks to firefighter and public safety, the circumstances under which the fire occurs, including weather and fuel conditions, natural and cultural resource management objectives, protection priorities, and values to be protected.

Increasing costs and small volunteer forces require that Carroll County pool their human resources to successfully deal with ever-increasing and more complex fire management tasks. Full collaboration among local, inter-local, regional, state and even federal fire management agencies would be crucial in the event of a large-scale wildland fire. There are currently 8 fire stations in Carroll County. The Fire Districts are: Vaiden, Mt. Pisgah, Valley Hill, Gravel Hill, Black Hawk, Calvary, Hickory Grove, and Beat 4 - Highway 430. There are currently no development or land use standards in Carroll County.

VI. PRIORITIZED MITIGATION RECOMMENDATIONS

Executive Summary

The following recommendations were developed by the Carroll County Development Team as a result of the Community Wildfire Risk Assessment. The recommendations are prioritized based on the following factors:

- **Fuel Management:** reducing target hazardous fuels based on known fire risk, fire behavior, and threats to life and property.
- **Social and Political:** social and political concerns play a major part in defining treatments and their locations.
- **Operational:** because of financial, infrastructure, and personnel constraints, emphasis must be placed on strategically located fuel treatments designed to protect life and property and critical infrastructure, and that can serve as anchor points for larger landscape-scale treatments.
- **Ecosystem:** reducing hazardous fuels should be integrated with overall ecosystem conservation, restoration and management goals.
- **Ethical:** the continuing decline of forest health and the increasing probability of catastrophic fires, and their potential impact on Carroll and Carroll Counties is a reality. The need to act now to restore forest health and reverse this dangerous trend is a top priority.
- **Economic:** use and maintenance of fuel treatment benefits include:
 1. They save money by avoiding suppression costs, rehabilitation costs, and compensation for property damage.
 2. They are an investment in protecting lives of both firefighters and civilians.
 3. They present new opportunities for rural economic development.
 4. They may help address issues related to the availability of homeowner's insurance in fire prone forest ecosystem.

The foundational information was gathered from fuel and structure data and interviews with community officials and stakeholders.

Community Involvement: Throughout any treatment operation, the Fire Coordinator and designated staff member(s) must maintain contact with potentially affected residents. Input and concerns from such persons must be considered, and where possible, incorporated into the overall effort. Treatments bordering neighborhoods should be explained to residents: through public meetings or going door to door to each residence, explaining the project, and gathering comments.

Use of measures to reduce fire risk and improve community protection are not limited to public lands: they must also occur on private property. Preparing and equipping homes through the FireWise program can greatly enhance protection of their investments. This will require development standards used prior to construction, hazards fuel reduction, fire resistive materials and construction techniques, proper landscaping techniques, regular maintenance, home assessments by the local fire departments, and neighborhood coordination.

Proposed Community Hazard Reduction Priorities

Primary Protection for Community and its Essential Infrastructure*		
Treatment Area	Treatment Types	Treatment Method(s)
1. Improve access on roads	Widening existing roads	Cutting excess brush & grading road
2. Source of water in different county locations	Water storage	Water storage tanks places in strategic locations
3. Acquire small brush trucks	Essential equipment	Small brush trucks ideal for all types of terrain
4. Create permanent fire-break around E.O.C.	Gravel or appropriate vegetative cover	Cut/remove stumps; apply permanent firebreak
*Eligible under the HFRA for minimum (50%) WUI funding		

Risk Reduction for Other Community Values**		
Treatment Area	Treatment Types	Treatment Method(s)
1. Clarify burn ban procedures	Procedural	Written procedures
2. Create list of cooperators	Procedural/Resources	Make contact list of available resources (ground equipment, planes, etc.)
3. Firebreak for Big Hungry area	Creation of firebreak	Keep break open and clear
** Not eligible under the HFRA for minimum (50%) WUI funding		

Proposed Education and Outreach Priorities		
1. Schedule Fire Wise program for county	MFC & National Park Service	Spring 2009
2. Schedule Mississippi Wildfire Prevention Teachers' Workshops	MFC	Summer 2009
3. Place articles aimed at homeowner education in local newspaper	MFC	Quarterly
4. Train Fire Wise facilitators for Carroll Co.	MFC & National Park Service	Annually

Mississippi Fire Weather Watch and Red Flag Warnings: The National Weather Service at Jackson, Mississippi provides Fire Weather Watch and Red Flag Warnings to alert the public and land management agencies of developing weather conditions that, when combined with critically dry wildland fuels, could lead to dangerous wildfires.

Criteria for Red Flag Events in the Forecast Area: Fire Weather Watches/Red Flag Warnings are issued when the combination of dry fuels and weather conditions are such that extreme fire behavior or ignition is occurring or is expected to occur. Forecasters will coordinate with local fire and land managers (State Forestry Commissions/US Forest Service) through the Interagency Coordination Centers of Louisiana...Arkansas and Mississippi to discuss the issuance of a Fire Weather Watch or Redflag Warning. In addition, issuing offices should coordinate with adjacent weather offices.

Below are some of the criteria used to consider issuance of Red Flag/Fire Weather Watch Conditions:

1. Keetch-Byram Drought Indices approaching or greater than 650 from 9-15 to 5-15 or Relative Humidity less or equal to 25%
2. 20 foot wind speed of greater or equal to 20 mph
3. NO rainfall greater than a half inch in the previous five days

Both the state and federal agencies for the region are consulted by the National Weather Service before issuing a Red Flag/Fire Weather Watch Warning.

The National Weather Service will also issue Fire Danger Statements. These statements are issued under rare circumstances of extremely dry or drought conditions for the entire or part of the region. Distribution will be over NOAA Weather Radio, Internet and the Weather Wire.

The statements include the following items:

1. Highlight one of these statements
 - o ...FIRE DANGER INCREASING IN (Area to be Named)
 - o ...HIGH FIRE DANGER CONTINUES IN (Area to be Named) we will not use the term Extreme.
2. Elaborate on the situation with a direct quote of the appropriate Fire Control Agency (State or Federal).
3. Indicate any changes (or no changes) in the weather situation expected over the next few days relative to the fire danger situation. We will not use fire or fire danger in describing the chances of rain, wind, or other weather parameters. We will leave fire behavior to the fire agencies.
4. Request for individual cooperation. The state or federal request that caution jbe exercise to help prevent forest and grass fires.

Potential Funding Sources

- 1. Assistance to Firefighters Grant Program**
- 2. Fire Prevention and Safety (FP&S) Grant Program**
- 3. Staffing for Adequate Fire and Emergency Response (SAFER) Grant Program**
- 4. USDA Rural Development Community Facilities Grant Program**
- 5. MEMA – Hazard Mitigation Grant Program**
- 6. MDA – CDBG, CAP Loan, and Small Municipality & Limited Population County Grant Program**
- 7. USDA Natural Resources Conservation Service (RCS)**

Timetables (highest priority projects)

Project	Duration	Start Date	Finish Date
1. Fire Wise Program	1 Day	March 15, 2009	March 15, 2009
2. Create firebreak around E.O.C.	2 weeks	March 1, 2009	March 15, 2009
3. Improve road access	2 years	January 1, 2009	December 31, 2011
4. Water storage	3 years	January 1, 2009	December 31, 2012

Environmental Assessment Checklist

The following checklist is a sample to be use for specific projects.

[Environmental Review Guide HUD CPD 782, 24 CFR 58.40; Ref. 40 CFR 1508.8 & 1508.27]

Evaluate the significance of the effects of the proposal on the character, features and resources of the project area. Enter relevant base data and verifiable source documentation to support the finding. Then enter the appropriate impact code from the following list to make a determination of impact. Impact Codes: (1) - No impact anticipated; (2) - Potentially beneficial; (3) - Potentially adverse; (4) - Requires mitigation;

(5) - Requires project modification. Note names, dates of contact, telephone numbers and page references. Attach additional material as appropriate. Note conditions or mitigation measures required.

Land Development	Code	Source or Documentation
Conformance with Comprehensive Plans and Zoning		
Compatibility and Urban Impact		
Slope		
Erosion		
Soil Suitability		
Hazards and Nuisances including Site Safety		
Energy Consumption		
Noise - Contribution to Community Noise Levels		
Air Quality Effects of Ambient Air Quality on Project and Contribution to Community Pollution Levels		
Environmental Design		

Visual Quality - Coherence, Diversity, Compatible Use and Scale		
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Socioeconomic	Code	Source or Documentation
Demographic Character Changes		
Displacement		
Employment and Income Patterns		

Community Facilities and Services	Code	Source or Documentation
Educational Facilities		
Commercial Facilities		
Health Care		
Social Services		
Solid Waste		
Waste Water		
Storm Water		
Water Supply		
Public Safety		
- Police		
- Fire		
- Emergency Medical		
Open Space and Recreation		
- Open Space		
- Recreation		
- Cultural		
Facilities		
Transportation		

Natural Features	Code	Source or Documentation
Water Resources		
Surface Water		
Unique Natural Features and Agricultural Lands		
Vegetation and Wildlife		

Other Factors		Source or Documentation
Flood Disaster Protection Act [Flood Insurance] [§58.6(a)]		
Coastal Barrier Resources Act/ Coastal Barrier Improvement Act [§58.6(c)]		
Airport Runway Clear Zone or Clear Zone Disclosure [§58.6(d)]		
Other Factors		

Summary of Findings and Conclusions

ALTERNATIVES TO THE PROPOSED ACTION

Alternatives and Project Modifications Considered [24 CFR 58.40(e), Ref. 40 CFR 1508.9] (Identify other reasonable courses of action that were considered and not selected, such as other sites, design modifications, or other uses of the subject site. Describe the benefits and adverse impacts to the human environment of each alternative and the reasons for rejecting it.)

No Action Alternative [24 CFR 58.40(e)]

(Discuss the benefits and adverse impacts to the human environment of not implementing the preferred alternative).

Mitigation Measures Recommended [24 CFR 58.40(d), 40 CFR 1508.20]

(Recommend feasible ways in which the proposal or its external factors should be modified in order to minimize adverse environmental impacts and restore or enhance environmental quality.)

Additional Studies Performed

(Attach studies or summaries)

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]

VIII. EVALUATION AND SUSTAINABILITY

Evaluation Strategy

To coordinate tracking and monitoring of the CWPP, the Development Team will appoint a Review Team to include, at a minimum, representatives from the Carroll County local government, Carroll County Emergency Management Agency, Carroll County Fire Department, Mississippi Forestry Commission, U.S. Forest Service, and citizens at large. Initiating activities right after formal approval of the CWPP and utilizing input from various sources, the Review Team should evaluate and report on the accomplishments and challenges in meeting the overall goal of this plan:

To protect Carroll County and surrounding communities, and associated values and infrastructure from catastrophic wildfire by means of:

- An educated and involved public,
- Implementation of forest treatment projects designed to reduce wildfire threat and improve long-term forest health, in a prioritized manner, and
- Use of FireWise building techniques and principles.

The Review Team should also be tasked with designing and coordinating implementation of a multi-party monitoring program to gather data with which to accomplish their evaluation and reporting. The monitoring will need to address diverse areas such as fuel reduction and fire behavior, ecosystem restoration, ecological impacts and social and economic issues.

All CWPP projects must allocate funds to accomplish monitoring (approximately 5-10% project costs is a target), and establish a formal process for integrating the results of that monitoring through time back into the land management decision-making process.

At a minimum, each of the three items in the goal above will be evaluated based on the following criteria:

1. **Implementation** – Did the needed treatments occur and in what locations? Treatment Maps should be updated annually and shared with the community and all responsible parties.
2. **Effectiveness** – How effective are the various treatments. Have they done what was expected in terms of fire risk reduction?
3. **Understanding Restoration** – What information was gathered about how fuels reduction and forest restoration actions affect plants, animals, soils, watersheds, and ecosystems within the project area?
4. **Social Monitoring** – Assess public attitudes toward on-going and proposed treatments. Some indicators may be editorials and other media coverage, letters to the editor, and requests for assistance.
5. **Economic Impacts** – In order for the CWPP to be sustainable, viable small diameter wood-based businesses are crucial. Evaluation of this aspect may be coordinated with state economic analysts.

Sustainability Plan

If Carroll County citizens are to continue to enjoy healthy, green forests and the economic values of forest-based industries, sustainable forest management is critical.

Because wildfires, insects and disease do not respect jurisdiction boundaries and public/private property ownership, collaboration and cooperation between landowners, agencies, community leaders and the public is essential for effective fuel reduction and forest health improvement projects to proceed.

Insurance companies should be engaged and encouraged to develop market-based incentives to incorporate “FireWise” building principles in design, construction, and maintenance of homes and developments in the Wildland Urban Interface (WUI).

The use of biomass is an important key to sustainability. Carroll County is fortunate to have markets and local infrastructure to use commercial saw logs and pulp. Additional markets and technologies should be pursued to use other by-products of logging operations, forest restoration and hazardous fuel reduction treatments.

Sustainable timber harvest from Carroll County lands (both private, public and commercial) should continue to be promoted through existing markets and policies.

On the average, insects and diseases kill trees on far more acreage each year than wildfire, affecting thousands of acres across Mississippi. Current vegetation trends and an ongoing lower-than-normal rainfall averages have significant implications for the future condition of forest sustainability. Change in forest ecosystems is inevitable, but appropriate management choices can influence the rate and direction of change.

Because of local budgetary constraints, establishing on-going funding for fuel treatment programs is crucial to the sustainability of the CWPP Action Plan. Carroll County should remain engaged in the challenges to improve forest health and provide a sustainable supply of raw material to the timber industry as a key stakeholder.