

# BIG FLATS/MONROE COMMUNITY WILDFIRE PROTECTION PLAN



**NORTH CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION**

**TOWNS OF BIG FLATS & MONROE  
ADAMS COUNTY, WISCONSIN**

# COMMUNITY WILDFIRE PROTECTION PLAN

prepared for:

Big Flats/Monroe  
CWPP Planning Committee

by:

*North Central Wisconsin Regional Planning Commission*

adopted by Town of Big Flats Board of Supervisors on:

**July 13, 2010**

adopted by Town of Monroe Board of Supervisors on:

**July 27, 2010**

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This plan was prepared at the request and under the supervision of the Towns of Big Flats and Monroe Joint Wildfire Plan Steering Committee and the Wisconsin Department of Natural Resources by the North Central Wisconsin Regional Planning Commission (NCWRPC). For more information, contact:

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## **CHAPTER 1: INTRODUCTION**

### **PLAN PURPOSE**

This plan is a Community Wildfire Protection Plan (CWPP) as defined in Title 1 of the Healthy Forest Restoration Act (HFRA) of 2003. The purpose of this CWPP is to provide the Towns of Big Flats and Monroe, Big Flats Fire Department, the Wisconsin Department of Natural Resources (WDNR), and other partners with information and tools to help them reduce potential risks associated with wildfires and to collaboratively identify wildfire mitigation actions that will provide solutions to address the impacts of wildfire hazards. The plan will also assist the citizens of the two towns to prevent wildfires and be better prepared to deal with wildfire hazards. The plan develops strategies aimed at protecting life, property, and the natural environment.

### **COMMUNITY WILDFIRE PROTECTION PLAN**

A CWPP is a written document that identifies how a community will reduce its risk from wildland fires. A CWPP is mutually agreed upon by local, state, and federal representatives and stakeholders.

A CWPP should be developed in any community that is in proximity to highly flammable wildland fuels, or is listed as an "at-risk" community in a federal or state risk assessment. The Towns of Big Flats and Monroe are interspersed with highly flammable wildland fuels and have been identified as "very high risk" communities in the Wisconsin Communities-at-Risk (CAR) assessment.

A CWPP requires the following three elements:

- **Prioritized fuels reduction** – Identification and prioritization of wildland areas for hazardous fuels reduction treatments, as well as recommending methods for achieving hazardous fuels reductions on both private and public lands.
- **Treatment of structural ignitability** – Recommendations that homeowners can take to reduce structural ignitability throughout the at-risk community.
- **Collaboration** – Ensures a collaborative effort between local and state government is used to prioritize fuels reductions and recommend measures to treat structural ignitability.

### **Collaboration/Planning Committee**

The Big Flats/Monroe Community Wildfire Protection Plan development process is intended to be open and collaborative in its effort to improve the safety of the community and its resources. The Planning Committee was made up of representatives from the communities, local fire department, and state and other agencies. The representatives listed below comprise the core decision-making team that are responsible for the plan and mutually agreed on the plan's contents:

- *Bob Kissinger, Supervisor, Town of Monroe*
- *Todd Peterson, Chair, Town of Big Flats*
- *Nancy Livingston, Homeowner, Town of Big Flats*
- *Bob Kissinger, Supervisor, Town of Monroe*
- *Bob Morris, Supervisor, Town of Monroe*
- *Darrin Johnson, Wisconsin River Power Company*
- *Don Krohn, Homeowner, Town of Big Flats*
- *Cheryl Chetney, Homeowner, Town of Big Flats*
- *Ron Devore, Homeowner, Town of Monroe*
- *Jodi Stormoen, Friendship Forest Ranger, WDNR*
- *Amy Luebke, Wildland-Urban Interface Specialist, WDNR*

### **Statement of Intent**

The intent of this plan is to help fire protection agencies, community leaders, and natural resource professionals be better prepared to protect the community's residents, property, and natural resources against the negative impacts of wildfire.

### **Planning Process**

The steps in the Big Flats – Monroe Community Wildfire Protection Plan process were adapted from the publication "Preparing a Community Wildfire Protection Plan: A Handbook for Wildland-Urban Interface Communities" as follows:

#### **1. Convene Decision Makers and Involve State and Other Agencies**

The process began with a meeting of representatives from local government, local fire authorities, and state agencies on August 17, 2009 in Big Flats, Wisconsin. The meeting was facilitated by the Wisconsin Department of Natural Resources.

- This initial meeting provided overview information on CWPPs, the planning process, and available grant funding.
- A discussion on roles and responsibilities helped establish the planning committee (listed above) and determined that the North Central Wisconsin Regional Planning Commission would facilitate the process and draft the plan for the towns.

#### **2. Engage Interested Parties**

A broad range of interested organizations and stakeholders were contacted and encouraged to be part of the development of the CWPP. The contact list included homeowners, fire department members, town officials, businesses and others. From these contacts, a working committee was established to guide the CWPP process.

**3. Establish a Community Base Map**

Working with WDNR and local representatives, the Regional Planning Commission developed a base map (Map 7) of the communities that is used to display inhabited areas at risk and areas that contain critical infrastructure. The base map is also used to identify planning units within the towns as defined by the Planning Committee.

**4. Develop a Community Risk Assessment**

Working collaboratively, the WDNR, Regional Planning Commission and local representatives developed a risk assessment for the area based on fuel hazards, risk of wildfire occurrences, at-risk infrastructure and other community values at risk, and local preparedness and firefighting capability.

**5. Establish Community Hazard Reduction Priorities and Recommendations to Reduce Structural Ignitability**

From Planning Committee discussions, the towns established an overarching goal to "provide for protection of life, property and resources from wildfire." The committee then established prioritized objectives to achieve that goal. Objectives are listed below.

**6. Develop an Action Plan and Assessment Strategy**

Mitigation strategies were developed by the Planning Committee to help the towns meet the established mitigation objectives. The mitigation action plan details specific activities the towns plan to undertake to meet the established wildfire protection objectives.

**7. Complete the Community Wildfire Protection Plan**

The plan is finalized after mutual agreement from the Planning Committee is achieved. Adoption of the CWPP by the Towns of Big Flats and Monroe completes the plan.

**Planning Goal and Objectives**

The Towns of Big Flats and Monroe CWPP Planning Committee identified and prioritized the following goal and objectives to be the foundation for this Community Wildfire Protection Plan:

**Goal: Provide for protection of life, property and resources from wildfire.**

**Objective 1:** Reduce hazardous fuels on private land and around structures (home ignition zone).

**Objective 2:** Educate and involve the community in assessing and reducing wildfire hazards in a safe and effective manner.

**Objective 3:** Identify and mitigate safety hazards to the public and firefighters.

**Objective 4:** Improve intergovernmental coordination and cooperation in wildfire planning and protection.

**Objective 5:** Create new approaches to getting wildfire prevention messages to the public.

**Objective 6:** Identify needs to improve local fire department suppression capabilities (both structural and wildfire)

## **CHAPTER 2: COMMUNITY PROFILE AND EXISTING CONDITIONS/RISKS**

This chapter looks at the community profile and some existing conditions in Big Flats and Monroe that may add to the challenges of managing a wildfire, could further fuel a wildfire, or are considerations related to wildfire mitigation or management.

### **LOCATION**

The Towns of Big Flats and Monroe are located in northern Adams County in north central Wisconsin; see Map 1 – Locational Map. The towns are side-by-side just north of Adams-Friendship, and Monroe is adjacent to Lake Petenwell. The surrounding towns include Rome, Leola, Colburn, Richfield, Preston and Strongs Prairie.

The Town of Big Flats consists of approximately 30,761 acres (48.1 square miles) while Monroe has approximately 24,609 acres (38.5 square miles). Although there are no incorporated communities within the towns, there are nodes of development on the lake and pockets of residential development and subdivisions.

### **COTTONVILLE FIRE**

In 2005, Adams County experienced the most destructive wildfire in Wisconsin in the last 25 years. Known as the Cottonville Fire, the fire began on May 5 when debris burning in a fire pit got out of control. Approximately 3,410 acres were burned in the Towns of Big Flats, Colburn and Preston covering an area 1.5 miles wide and 7 miles long. Weather conditions were ideal for fire: warm and windy with very low humidity. Part of "sand country", Adams County's dominant vegetation is grass, pine and scrub oak, which are all known to burn quickly and intensely. Fire spread quickly to the tops of the pine trees.

Losses included 9 primary homes, 21 seasonal homes, and 60 outbuildings. Damage was sustained to 15 other homes. Evacuation of 200 residents was required. Firefighting efforts were massive with 5 aircraft (1 from Minnesota DNR), 200 WDNR personnel from across the state, 19 volunteer fire departments and law enforcement from State Patrol, Adams, LaCrosse and Vernon County Sheriffs and Onalaska Police. The fire took 11 hours to bring under control and several days for mop-up. The courts set restitution at over \$1.4 million indicating the level of damages.

### **LAND OWNERSHIP**

Public land ownership is not substantial in the two towns. The Department of Natural Resources owns a small tract of around 200 acres in the southeast corner of Big Flats and Adams County has Petenwell County Park located in Monroe with about 190 acres. The predominant land ownership feature in the towns is the presence of significant area of private, industrial forestland. Corporate ownership comprises 3,463 acres or 24% of the total land area in the Town of Monroe and 10,131 acres or 33% in the Town of Big Flats. See Map 2.

## **LAND USE**

Land use is an important determinant in the potential impact wildfire may have on an area and the necessary mitigation actions. Land use mapping depicts the activities or usage on the land surface such as woodlands or residential development. An understanding of the land use within the towns is an important consideration. Map 3 depicts the land use present in the towns.

<i>Type</i>	<i>Big Flats</i>	<i>Monroe</i>	<i>Totals</i>
Agriculture	1,564	1,684	3,248
Commercial/Industrial	78	6	84
Governmental	38	19	57
Open Space	250	187	437
Open Water	104	10,595	10,699
Recreation	0	190	190
Residential	2,651	1,184	3,835
Transportation	1,036	564	1,600
Woodlands	25,040	10,180	35,220
Total	30,761	24,609	55,370

*Source: NCWRPC GIS*

The majority of the land in the towns (64% of the total acreage) is woodlands, primarily in use for forestry and recreational activities; see Table 1. Of the remaining area, the land uses consist of residential development (7 percent), agricultural land (6 percent), transportation infrastructure (3 percent), commercial and industrial development (0.2 percent), and governmental, open space, recreation and water make up the remaining percentage.

### **Woodlands**

Woodlands consist of land that remains undeveloped and includes forestlands (both managed and unmanaged), water features, and other natural areas. Woodlands account for the largest land use category within both towns. With the exception of the pockets of concentrated residential and other scattered development throughout, the towns are almost entirely covered by forest. The woodlands cover 25,040 acres of land, or 81 percent of the Town of Big Flats and another 10,180 acres or 41 percent of the Town of Monroe.

Certain vegetation types within woodlands present a higher flammability risk than other types. The following vegetation types present the highest flammability risk and are the most volatile (listed in order of highest to lowest risk): jack pine, red pine, oak, birch-aspens, and mixed hardwoods.

### **Open Space**

Open space consists of natural areas that do not fit into the woodlands or agricultural categories and may include grasslands, wetlands (all types), bogs, floodplain areas, and other brush or shrub lands. A "catch-all" type of category that comprises only 437 acres between the two towns.

Fire characteristics vary, but some of the grasses and shrubs can be a source for quick-moving spring fires that create a threat for nearby structures.

### **Agricultural Land**

Agricultural land, including croplands, pastures, and other land, accounts for 1,564 acres of land in the Town of Big Flats and 1,684 in Monroe. The agricultural land is located primarily in the western half of Monroe and the central area of the Town of Big Flats.

Croplands/pastures are often open vegetation lands containing tall grasses that can be a source for quick burning, spring fires that create a threat for nearby structures.

### **Residential Land**

Residential land within Big Flats includes about 2,651 acres or 8.6 percent of the Town's area. In Monroe, residential land covers approximately 1,184 acres or 11.6 percent of that Town's area. Residential use in the Towns is primarily made up of single-family homes (59.6 percent in Big Flats and 70.2 percent in Monroe). Mobile homes make up another 38.7 and 27.7 percent in Big Flats and Monroe, respectively. The remaining residential land is comprised of multi-family and other types of homes, which make up only about 2 percent in each town. The number of residential units for seasonal use is about 45% in Big Flats and 56% in Monroe.

From a fire perspective, residential structures represent one of the primary values to protect from wildfire. Conversely, although not a leading cause, structure fires can result in wildland fire.

### **Transportation Uses**

The local, county, and state roads running through the towns fall under the land use category of transportation uses and account for 1,600 acres of land. This category does not include recreation trails.

Roads lead people into remote areas increasing fire risk in those hard-to-reach areas. However, roads present a duality in that they are a recognized ignition source but also aid in fighting fires by providing equipment access as well as acting as escape routes.

### **Institutional/Governmental**

Institutional/governmental uses total about 38 (0.12%) and 19 (0.08%) acres of land respectively in Big Flats and Monroe. The town hall, fire stations, and transfer stations are the main uses within this category in the towns.



Institutional facilities can serve as important incident command posts and/or staging areas during a fire. Some sites, such as transfer stations, may be potential sources of ignition depending on what activities are being conducted.

### **Commercial/Industrial Land**

Commercial and industrial uses make up only about 84 acres of land between the two towns. This accounts for less than one percent of the total area. This development is scattered but primarily located along major roadways like State Highway 13 and the various county highways (CTH C and CTH Z).

From a fire perspective, commercial properties represent another community value to protect from wildfire. Some businesses may also be a potential source of ignition or harbor hazardous and/or flammable materials which firefighters should be aware of.

### **Recreational Uses**

Monroe has 190 acres (0.77%) of land designated recreation (county park) within the town, while Big Flats has none. Due to the town's wooded nature, a number of recreational uses exist within the woodlands land use category that is not counted under the recreational category.

It is important for both fire management personnel and recreational users to be mindful of the fact that campers, ATV users, and other 4x4 vehicle users bring ignition risk in difficult to access areas with high hazard fuels.

### **WILDLAND URBAN INTERFACE (WUI)**

People continue to move from urban and suburban areas to rural areas such as Big Flats and Monroe that offer attractive recreational and aesthetic amenities, especially forests. This demographic change is expanding the wildland-urban interface (WUI). The WUI is the area where structures and other human development meet and intermix with undeveloped wildland. The expansion of the WUI in recent decades has significant implications for wildfire impact and management. The WUI creates an environment that enables fire to move swiftly between structural and vegetative fuels. Its expansion increases the likelihood that wildfires will threaten structures and people.

Through development of this plan, the entire towns of Big Flats and Monroe are identified as wildland-urban interface area.

### **DEVELOPMENT PATTERN**

If a wildfire threatens the forestlands of Big Flats and Monroe, many homes and structures within those forestlands are threatened as well, because of the development pattern within the towns. Development is concentrated in pockets and subdivisions as well as being scattered along rural roads, as is often the case in Wisconsin towns. Outside of these concentrations of development, the vast majority of both Towns remains undeveloped with large, unfragmented tracts of forestland.

## **POPULATION AND HOUSING**

### **Population, Estimates, and Projections**

Over the past 10 years, the Towns of Big Flats and Monroe have experienced a steady population increase, as shown in Table 2. From 1990 to 2000, Big Flats experienced a significant increase in population with a 29 percent increase (215 persons), representing a higher percent change than Adams County and the state during the same time. Monroe experienced a 19 percent increase (58 persons), but trailed the County in growth.

<b>TABLE 2: POPULATION TRENDS</b>				
	<b>1990</b>	<b>2000</b>	<b># '90-'00</b>	<b>% '90-'00</b>
Big Flats	731	946	215	29
Monroe	305	363	58	19
Adams County	15,682	19,920	4,238	27
Wisconsin	4,891,769	5,363,675	471,906	10

*Source: US Census and NCWRPC*

The Wisconsin Department of Administration (WDOA) Demographic Services Center annually produces population estimates for Wisconsin counties and municipalities. The estimates are based on the prior Census and analysis of contemporary data including housing units, dormitory and institutional populations, automobile registrations, residential electric meters, and others.

The 2009 population estimate for the Town of Big Flats is 1,056 persons, representing another 110 persons over the 2000 population and a 12 percent increase. The 2009 population estimate for the Town of Monroe is 480 persons representing another 117 persons over the 2000 population and a 32 percent increase.

In 2008, WDOA prepared baseline population projections to the year 2035 for Wisconsin counties and municipalities, utilizing a projection formula that calculates the annual population change over three varying time spans. From this formula, the average annual numerical population change is calculated, which is used to give communities preliminary population projections for a future date.

The baseline population projections prepared for both towns by WDOA predict a steady increase in population from 2010 to 2030, as shown in Table 3. The projection predicts a 2030 population of 1,312, which is an increase of 366 persons over the 2000 Census for the Town of Big Flats. The Town of Monroe baseline population projections predicts a 2030 population of 578 that is an increase of 215 persons over the 2000 Census.

<b>TABLE 3: POPULATION PROJECTIONS</b>					
	<i>2010</i>	<i>2020</i>	<i>2030</i>	<i># '10-'30</i>	<i>% '10-'30</i>
Big Flats	1,104	1,231	1,312	208	18.8
Monroe	463	531	578	115	24.8
Adams County	22,175	24,259	25,455	3,280	14.8
Wisconsin	5,777,370	6,202,810	6,541,180	763,810	13.2
<i>Source: WDOA and NCWRPC</i>					

**Seasonal Population**

Since the Census does not provide the number of seasonal residents within a community, the seasonal population in the Towns was estimated by multiplying the number of seasonal housing units by the average number of persons per household.

In 2000, the Town of Big Flats had a full-time population of 946 residents and an estimated part-time/seasonal population of 851 residents. At that time there were 797 housing units in Big Flats, of which 362 or 45% were seasonal. In Monroe, the 2000 Census showed a full-time population of 363, and the estimated seasonal population was 488. At that time there were 402 housing units in Monroe, of which 226 or 56 % were seasonal.

**Population Impacts on Wildfire Risk**

A growing population in the Towns of Big Flats and Monroe means more people are living within the wildland-urban interface and more people are exposed to the threat of wildfire. Based on statistics, population growth in the WUI is a great concern since 95 percent of the fires are caused by people. This fact is evident in Map 6 which displays the cause of past fire occurrences in the towns.

**Age Distribution**

Over time, there has been a significant shift in the distribution of population within age groups in the Towns of Big Flats and Monroe. The median age in Big Flats increased from 38 to 45 between 1990 and 2000, while in Monroe it increased from 44 to 53. The Towns of Big Flats and Monroe have a significantly older population than the state as a whole.

This aging population base presents a significant challenge for staffing local volunteer fire departments. Many volunteer fire departments throughout Wisconsin and the U.S. face recruitment challenges, especially in the 18 to 34 age group, attributed to aging baby-boomers as the median age continues to climb.

**Housing Inventory**

The total number of housing units within the Town of Monroe grew by 12% between 1990 and 2000, which is in line with county and state rates over this time period, see Table 4. Big Flats, however, lost about 3% of its housing units between 1990 and 2000. This is likely attributable to the 1994 tornado that also destroyed the town hall and fire

station. Population was able to increase over this period through conversion of seasonal units to full-time.

<b>TABLE 4: TOTAL HOUSING UNITS</b>				
	<i>1990</i>	<i>2000</i>	<i># 90 - 00</i>	<i>% 90 - 00</i>
Big Flats	824	797	-27	-3.3
Monroe	359	402	43	12
Adams County	12,418	14,123	1,705	13.7
Wisconsin	2,055,774	2,321,144	265,370	12.9

*Source: US Census and NCWRPC*

The growth in the number of housing units in the towns since 2000 is reflected in Table 5. Overall housing unit additions in Big Flats peaked in 2006, while additions in Monroe have been on a steady decline. A negligible number of housing units are subtracted from year to year within a given community. For the distribution of houses and other structures within the towns, see Map 7.

<b>TABLE 5: HOUSING UNIT ADDITIONS 2001 - 2008</b>		
	<i>Big Flats</i>	<i>Monroe</i>
2001	n/a	n/a
2002	6	24
2003	12	32
2004	16	25
2005	19	11
2006	26	8
2007	22	6
2008	13	4
Total	114	110

*Source: Towns of Big Flats & Monroe*

The 2000 median value of housing units in Big Flats was \$64,500 compared to Monroe at \$83,500. For Adams County the median housing value was \$83,600

### **WEATHER CONDITIONS/FIRE SEASON**

The weather plays a very important role in how a fire will behave on a given day. Even a slight increase in wind speed can significantly increase the flame length and rate a fire will spread. A drop in relative humidity can make it easier for forest fuel to ignite and cause it to burn hotter and faster.

The National Weather Service (NWS) provides fire weather forecasts to land management agencies to aid in their fire planning, management, and control activities. These specialized forecasts are based on an interpretation and understanding of weather patterns that affect fire danger and behavior. Fire weather forecasting requires a unique

understanding of environmental conditions, especially the relationship between topography, fuels, and weather.

History indicates spring to be the most active season for fire in Wisconsin since dead fuels are abundant, temperatures increase, winds are often gusty, and relative humidity often drops to very low levels. During the summer, there is usually a decrease in fire danger as fine grass fuels green up and fuel moisture increases. During the fall, there can be an increase in fire activity as trees drop their leaves and frost cures the fine fuels. However, due to shorter day length, higher humidity, and cooler temperatures fall fire season is typically not as active as the spring fire season. Typical fire weather seasons in Wisconsin are as follows:

- Spring – March 15 to June 15
- Summer – June 15 to September 1
- Fall – September 1 to November 15

These fire weather seasons are general dates. Wildland fires can occur during any month of the year whenever the ground is not snow covered.

### **TREE AND VEGETATION MORTALITY**

Tree and vegetation mortality create more fuel for wildfire. Some causes of concern in the area include insect infestation, disease, drought, and downed trees from storms.

#### **Insect Infestation**

Forestlands in Big Flats and Monroe are generally in good health and free of significant insect infestation, though periodic outbreaks do occur and problems do exist in certain stand types. The following descriptions provide information on three insect infestations of concern in central Wisconsin: jack pine budworm, gypsy moth, and two-lined chestnut borer.

Trees in poor health or under drought stress may decline and die after repeated severe defoliation. Furthermore, defoliation will sometimes cause stress in otherwise healthy trees that may attract secondary pests, such as the two-lined chestnut borer. While the trees are bare, the lack of shade will decrease soil moisture during the dry season, which could cause mortality from lack of moisture.

#### **Jack Pine Budworm**

Outbreaks of this budworm occur predominately in stands of jack pine, although Scots, red, and white pines may also be attacked. Trees of all sizes are attacked. Defoliation by the jack pine budworm reduces tree growth, retards regeneration, and causes tree mortality.

#### **Gypsy Moth**

The gypsy moth is an invasive pest. The caterpillars feed on the leaves of many trees, especially oaks, and their populations can grow so quickly that they can strip all the

leaves off of entire stands of trees, damaging them severely. Although gypsy moths may not directly cause tree mortality, they create a vulnerable forest that can lead to mortality.

### **Two-lined Chestnut Borer**

The two-lined chestnut borer is a common secondary pest in trees that have been defoliated several years in a row. Oaks that have been defoliated by insects such as gypsy moth can be attacked and killed by the two-lined chestnut borer.

### **Disease**

Forestlands in Big Flats and Monroe are generally in good health and free of significant disease, though periodic outbreaks do occur and problems do exist in certain stand types. The following descriptions provide information on two diseases of concern: red pine pocket mortality and oak wilt.

### **Red Pine Pocket Mortality**

Red pine pocket mortality is caused by a complex of insects, such as red turpentine beetle and bark beetle, and root rot fungi. Thinned, plantation-grown red pines between 30 and 45 years are most likely to show signs of this syndrome. The pockets start small with a few dead trees surrounded by trees with reduced shoot growth and thin crowns. Each year a few trees on the edge of the pocket die and the pocket expands. As the disease progresses and red turpentine beetle attacks increase, the successful invasion of pine bark beetle occurs. The infestation of pine bark beetles kills the trees.

### **Oak Wilt**

Oak wilt is caused by a fungus that forms a balloon-like swelling in the water conducting vessels of the oak tree. The obstruction in the vessel slows the movement of water within the tree causing the leaves to wilt and drop off.

Oaks in the red oak group (black, northern red, northern pin and others with pointed leaf edges) are most susceptible. Oaks in the white oak group (white, swamp white, burr, and others with rounded leaf edges) are less susceptible.

### **Drought**

Drought is defined as a deficiency of precipitation over an extended period – usually a season or more. Drought is a normal, recurring climatic event that is expected to become more frequent as our climate changes. It occurs in virtually all climatic zones, but its characteristics vary significantly from one region to another.

Drought causes stress on vegetation that can cause forests to be more vulnerable to insects and diseases as well as leading to mortality in situations of prolonged drought. If mortality occurs over contiguous forest blocks, an area of increased wildfire fuel will be present in that area. Drought conditions create dry forest fuels that can lead to additional wildfire starts and cause increased fire behavior. Drought can extend the active fire season into the summer and fall.

Much of Wisconsin has been suffering drought conditions for the last several years. At the time of this writing, the U.S. Drought Monitor indicated that central and southern Wisconsin were seeing at least some temporary relief from drought conditions. Early in 2009, most of the area was shown under moderate to severe drought.

### **Severe Storms**

Severe storms are fairly common in Adams County. Such storms can cause significant damage to forestlands. Strong winds from storms can break and uproot trees leading to tree mortality and additional fuel for fires. In addition, high winds can cause trees to fall onto power lines, which can start fires and pose an electrical risk to people.

In addition to devastating tornados in 1992 and 1994, the following is a list of high wind events reported by the National Climatic Data Center for Big Flats and Monroe over the last five years:

- 06/29/05 Big Flats - 60-70 mph winds-downed numerous trees & power lines
- 07/23/05 Monroe /Big Flats - 60-80 mph winds-downed numerous trees & power lines

### **OTHER CONCERNS REGARDING WILDFIRE RISK**

Other concerns regarding wildfire risk in the area include access to property, fuels near structures, and structural flammability. These conditions may add to the challenges of managing a wildfire or could provide additional fuel to a wildfire.

Educational efforts such as Firewise (discussed later in this plan) would be beneficial to residents to remedy the following situations. Mitigation tactics to address these concerns have been developed for Big Flats and Monroe and are discussed later in the section on "Treatment of Structural Ignitability."

#### **Access**

Some residential driveways in the towns present challenges for firefighters to gain access to the property in case of a fire. Some driveways are very long with curves that are too sharp to allow emergency vehicles to gain access to the property. The lack of access or good turnarounds can pose a hazard to firefighters during a fast-moving fire.

#### **Fuels Near Structures**

Within the towns, many buildings have vegetation growing around them providing "fuel" near the structures. The area approximately 100-200 feet around all structures is referred to as the "home ignition zone." If left unmanaged, fire in this area can quickly move from vegetation to buildings.

#### **Structure Flammability**

Residents in the towns may not be well informed about how to reduce the flammability of their home. Buildings can provide fuel in a wildfire, including garages, campers, and

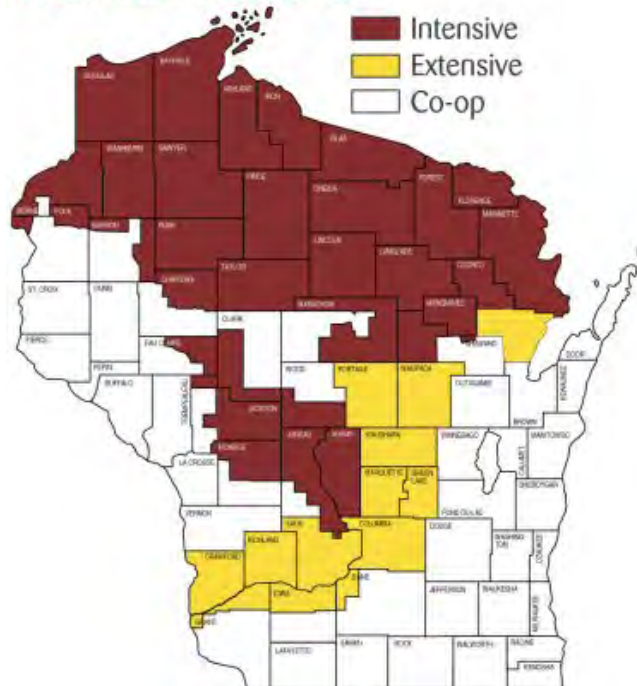
storage sheds. Anything attached to a structure, such as a deck, porch, or balcony is considered part of the structure. These structural attachments can provide the link for a fire to spread from the wildland to the building.

## **FIRE PROTECTION BACKGROUND**

The state of Wisconsin is divided into three fire protection areas: Co-op, Extensive, and Intensive, see Figure 1. Each fire protection area presents a different kind and degree of forest fire problem. The degree of protection has been determined by the amount of forested lands, the hazards and the risks present in the various parts of the state.

The Towns of Big Flats and Monroe are located within the Intensive fire protection area. Intensive fire protection areas are the most heavily forested and contain the most fire hazards and risk in the state. They have more WDNR fire suppression resources and ranger stations. Fire detection is accomplished with fire towers, aerial patrols, and citizen reporting. The most restrictive debris burning laws are in effect in Intensive fire protection areas.

**FIGURE 1 WDNR Fire Protection Areas**  
**Forest Fire Protection**



Source: WDNR Website

## **Fire Suppression Responsibilities**

Primary responsibility for fire suppression activities within the towns falls to the WDNR and the Big Flats Fire Department



<b>TABLE 6 DNR WILDFIRE SUPPRESSION RESOURCES (1 HR RESPONSE WINDOW)</b>		
<i>Station</i>	<i>Personnel</i>	<i>Apparatus</i>
Friendship FRU	1 Forester Ranger 3 Forestry Technicians 1 Team Leader 2 Foresters	1 Type 7 Engine 3 Type 4 Engines w/ plow 1 Type 8 Engine
Nekoosa FRU	1 Forester Ranger 2 Forestry Technicians 2 Foresters	1 Type 7 Engine 2 Type 4 Engines w/ plow
Babcock FRU	1 Forester Ranger 1 Forestry Technician 1 Sandhill Forester	1 Type 7 Engine 1 Type 4 Engine w/ plow 1 Type 8 Engine
Wisconsin Dells FRU	1 Forester Ranger 2 Forestry Technicians	1 Type 7 Engine 2 Type 4 Engines w/ plow
Whiting FRU	1 Forester Ranger 1 Forestry Technician 2 Foresters	1 Type 7 Engine 1 Type 4 Engine w/ plow 1 Type 8 Engine
Necedah FRU	1 Forester Ranger 2 Forestry Technicians 1 Team Leader 1 Forester	2 Type 7 Engine 2 Type 4 Engines w/ plow 1 Type 8 Engine
Wausau FRU	1 Forester Ranger 1 Forestry Technicians 1 Team Leader 2 Foresters	1 Type 7 Engine 1 Type 4 Engine w/ plow 2 Type 8 Engines
Wautoma FRU	1 Forester Ranger 2 Forestry Technicians 1 Forester	2 Type 7 Engines 2 Type 4 Engines w/ plow 1 Bombadier
Waupaca FRU	1 Forester Ranger 1 Forestry Technician 1 Forester	1 Type 7 Engine 1 Type 4 Engine w/ plow 1 Type 8 Engine
Montello FRU	1 Forester Ranger 2 Forestry Technicians 1 CO-OP Ranger	1 Type 7 Engine 1 Type 4 Engine w/ plow 1 Type 4 Engine w/ muskeg 1 Type 8 Engine
Tomah FRU	1 Forester Ranger 2 Forestry Technicians	1 Type 7 Engine 2 Type 4 Engines w/ plow
Oshkosh Air Patrol	Pilot	1 Aircraft

*Source: WDNR*

### **Wisconsin Department of Natural Resources**

The WDNR has 54 ranger stations that are outfitted with firefighting vehicles, tractors/plows, and staff to support wildland fire control in Wisconsin. The Wisconsin Rapids Dispatch Group includes six Ranger Stations and covers Adams, Portage and parts of Marathon, Wood, Juneau and Sauk counties.

The Friendship Fire Response Unit (FRU) is the closest to Big Flats and Monroe for wildfire suppression in the towns, and resources can be drawn from other stations as

necessary. Table 6 identifies primary WDNR fire suppression resources within one hour response time for a wildfire occurring in Big Flats or Monroe. In addition, the WDNR hires limited term employees as seasonal firefighters to assist with suppression and detection efforts. The WDNR has a number of mutual aid agreements with local fire departments, county and federal agencies, university and technical colleges, and private contractors. The State works with fire departments to provide wildfire suppression and offers training and financial assistance through grants and group purchasing. In addition, the state often contracts larger pieces of heavy equipment and fire suppression aircraft to augment existing resources. The WDNR is prepared to mobilize units across the state as the need arises, and has the ability to request out-of-state resources through both the Great Lakes Forest Fire Compact and Eastern Area Coordination Center.

**Adams County**

The Adams County Emergency Management Department assists with planning, grant writing and administration, coordinating training exercises and other assistance related to preparation and response to emergency situations. The County Emergency Management Director is the primary point of contact to obtain additional county, state (including National Guard) and federal resources as needed. The County has an Emergency Operations Center (EOC) established at the Community Center in Friendship.

The Adams County Sheriff’s Department can be dispatched with a mobile command post trailer or a mass casualty trailer upon request. The County may also supply heavy equipment primarily through the County Highway Department.

<b>TABLE 7: LOCAL FIRE SUPPRESSION RESOURCES - BIG FLATS FD</b>						
<i>Station</i>	<i>Unit</i>	<i>Pump Cap.</i>	<i>Tank Cap.</i>	<i>Drop Tank Cap.</i>	<i>Personnel</i>	<i>Misc. Equip.</i>
1	Engine 501	750	500		2	4 MSA SCBA
	Engine 503	1,000	1,000		2	4 MSA SCBA
	Tanker 511	250	3,500	2,100	2	
	Tanker 512	250	1,500	1,800	2	
	Rescue 531				6	Jaws, generator, spare air bottles, etc.
	Brush 541	60	150		2	
	Pump 552	150				Portable on trailer
	ATV				2	Portable pump
2	Engine 502	1,000	1,000		2	4 MSA SCBA
	Tanker 513	200	1,200		2	
	Brush 542	60	150		2	
	Fireboat				2	

*Source: Big Flats Fire Department*

The County dispatches the Town of Big Flats Fire Department through the countywide 911 system including mutual aid through adjacent departments.

**Big Flats Fire Department**

The Town of Big Flats Volunteer Fire Department provides fire suppression for the Towns of Big Flats and Monroe. Station 1 is located on CTH C adjacent to the Big Flats

Town Hall. Station 2 is located on CTH Z adjacent to the Monroe Town Hall. The Department provides structural and wildland fire suppression, rescue, basic emergency medical services, and a basic level of HAZMAT response capability. The fire suppression resources of the Department are shown in Table 7. The Department has 13 water access points spaced around the towns and wells located at each fire station.

There are currently 28 volunteer members on the department including a volunteer chief. The Big Flats Fire Department has mutual aid agreements with Adams County and surrounding community fire departments.

### **Fire Policy and Programs**

There are various programs and policies at the federal and state levels related to community fire planning, fire prevention, and suppression that affect the Towns. Each agency has laws regarding the use of fire and is able to investigate, enforce, and prosecute civil and criminal violations that arise out of fires originating within their jurisdiction. In general, burning laws regulate what, when, and how people can burn, and hold people responsible for damages and suppression costs if their fire escapes control.

#### **Federal**

The following information provides a brief overview of relevant federal policies and programs:

*Healthy Forests Restoration Act (HFRA)* – This federal law is designed to promote healthy watersheds and forests through fuels reduction projects on federal lands, community plans, insect and disease protection measures, storm damage clean-up, and threatened and endangered species protection. The HFRA also encourages biomass energy production through grants and assistance to communities to create market incentives for removal of otherwise valueless forest material.

*National Fire Plan (NFP)* – This is a federal interagency plan that focuses on firefighting, rehabilitation, hazardous fuels reduction, community assistance and accountability. The NFP is a long-term investment intended to help protect communities and natural resources. It establishes a commitment to communication, cooperation and collaboration between federal agencies, states, local governments, tribes and interested parties. Federal fire management agencies worked closely with these partners to prepare a 10-year Strategy and Implementation Plan. The NFP also calls for the development of Community Fire Plans to aid in implementing NFP goals.

#### **State**

The following information provides a brief overview of relevant state policies and programs:

*Permits* - The WDNR enforces burning laws and requires permits for debris burning in Adams County whenever the ground is not snow covered. Permits can be obtained from local emergency fire wardens and DNR ranger stations. Refer to the WDNR web page at

<http://dnr.wi.gov/forestry/fire/burning-rp.htm> to determine what is burnable with a permit and what is not permissible.

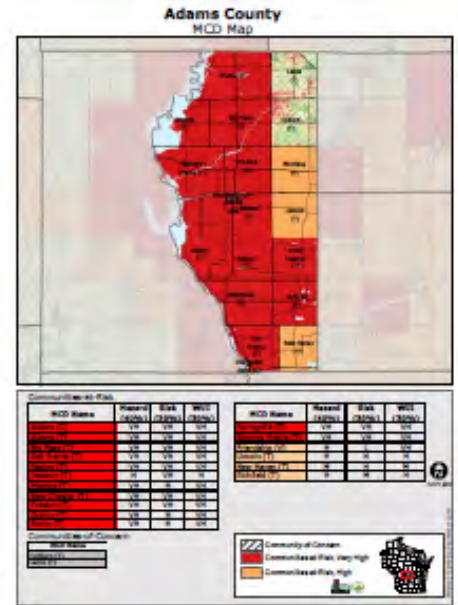
*Structure Zone Maps* - In 2005, the WDNR prepared structure zone map books for use by emergency services personnel in Adams County, including the Towns of Big Flats and Monroe. These maps document structure locations and preplanned zones used to coordinate efforts to help protect life, property, and natural resources during fire emergencies.

*Hazard Mitigation Program* - WDNR Forestry's Hazard Mitigation Program is an internal funding mechanism utilized to reduce the risk of catastrophic wildfire impacting communities. It focuses on hazardous fuels reduction, prevention/education, and community planning in the wildland-urban interface. The program is a product of the USFS State Fire Assistance - National Fire Plan and has been functioning in Wisconsin since 2001. The program has promoted Firewise practices, the creation of Community Wildfire Protection Plans, and the reduction of flammable wildland fuels. Viable projects located in a Community at Risk are prioritized for funding.

## CHAPTER 3: RISK ASSESSMENT

The Wisconsin Department of Natural Resources has created a statewide list of Communities-at-Risk (CAR) to wildfire. According to this statewide risk assessment the entire project area falls into the “very high risk” category (see Figure 2). In order to help the towns prioritize wildfire mitigation projects, a more localized assessment was completed by the CWPP Planning Committee.

The risk assessment identifies the areas of the community most at risk from wildfire, enabling decision makers to focus efforts on the higher risk areas and prioritize resource allocations and mitigation activities.



**Figure 2: Risk Assessment**

The risk assessment evaluated wildfire risk in Big Flats and Monroe by analyzing four key elements or "layers" of fire information. The four elements are hazard, risk, values, and protection capability. The Towns were evaluated to determine the areas most at-risk based on each of the four elements or layers of information. The four elements are defined below.

- **Hazard** - Natural conditions, including vegetation, soils, geology, and topographic features that may contribute to and affect the behavior of wildfire.
- **Risk** - The potential and frequency that wildfire ignitions might occur based upon historical occurrences over a 20-year period from 1985 to 2005.
- **Values** - The people, property, and significant / critical facilities or infrastructure representing value to protect from losses in the event of wildfire.
- **Protection Capability** - The ability to protect the community from structural and wildland fires including preparation, response, and suppression.

### PLANNING UNITS

To aid the risk assessment, the Towns of Big Flats and Monroe were divided into smaller, more manageable planning units. The CWPP Planning Committee identified planning units based upon commonalities within each planning unit, including distribution of developed areas and structures. The Planning Unit Map, Map 4 displays the planning units identified in the Towns. The seven planning units are as follows:

1. Lake Zone
2. South Monroe
3. NW Big Flats
4. Dead Horse Creek

5. Trout Valley
6. East Carter Creek
7. NE Big Flats

The following provides a description of each planning unit including the development pattern in the area, the number of structures, the number of significant/critical infrastructure, the total land acreage, and the total land area under residential land use and forestlands. The remaining land area of each planning unit is made up of open water, croplands/pastures, other non-forestland natural areas (including wetlands), roadways, and industrial, commercial, and institutional/governmental areas. See Map 4.

### **1. Lake Zone Planning Unit**

The Lake Zone planning unit is located in the northwest corner of Monroe adjacent to Lake Petenwell. This planning unit is highly residential and contains subdivisions known as Kennedy Waters, Petenwell Pines and Roberts Subdivision. The topography is hilly. Land records information data indicates that there are 448 structures. Significant facilities include the town hall, fire station, Petenwell County Park with campgrounds, and an electric transmission line. Total land area of the planning unit is 3,502 acres with 22 percent (765 acres) developed residential and 48 percent (1,676 acres) woodlands.

### **2. South Monroe Planning Unit**

The remaining portion of the Town of Monroe makes up the South Monroe planning unit. This planning unit is characterized by fewer homes interspersed with primarily young pine and pine/oak mix. Plum Creek ownership is significant. There are 192 structures and significant infrastructure including the town recycling transfer site and an electric transmission line. Land area totals 10,513 acres with 4 percent (424 acres) in residential and 81 percent (8,516 acres) woodlands.

### **3. Northwest Big Flats Planning Unit**

The Northwest Big Flats planning unit is comprised primarily of pine plantations and dominated by Plum Creek land. The topography is hilly. Land cover is 93 percent (5,393 acres) woodland. Total land area of the planning unit is 5,783 acres with 3 percent (157 acres) residential. There are 56 structures and no significant facilities.

### **4. Dead Horse Creek Planning Unit**

The Dead Horse Creek planning unit is located in the southwest corner of Big Flats. This planning unit is characterized by more homes and a number of subdivisions. It is a higher hazard area with a lot of private roads, and access is an issue. There are 677 structures and significant facilities including a communication tower, telephone substation, the former school building, the town hall, fire station, and a private campground. Total land area of the planning unit is 9,223 acres with 16 percent (1,435 acres) developed residential and 75 percent (6,951 acres) woodlands.

### **5. Trout Valley Planning Unit**

The Trout Valley planning unit generally corresponds with the Trout Valley subdivision of about 150 homes in central Big Flats. This planning unit is characterized by higher density homes with long, narrow lots. Homes in this area typically lack defensible space. Many of the properties are seasonal use. Tree cover is primarily scrubby jack pine. There are 217 structures and notable facilities including a communications tower, recycling transfer site, and a petroleum pipeline. Land area totals 1,651 acres with 33 percent (546 acres) in residential and 41 percent (685 acres) woodlands.

### **6. East Carter Creek Planning Unit**

The East Carter Creek planning unit is located in the southeast corner of Big Flats. This planning unit can be characterized as being sparsely populated. There are 134 structures, and a petroleum pipeline. Land area totals 7,264 acres with 3 percent (247 acres) in residential and 90 percent (6,535 acres) woodlands.

### **7. Northeast Big Flats Planning Unit**

The Northeast Big Flats planning unit is comprised primarily of agricultural land with fewer homes along town roads. The land is generally flat and marshy with a mix of pine and oak species. There are 107 structures and significant facilities include an electrical substation, a private campground, and a petroleum pipe line. Land area totals 6,736 acres with 4 percent (237 acres) in residential and 83 percent (5,568 acres) woodlands.

## **RISK ASSESSMENT METHODOLOGY/ANALYSIS**

The model used in this risk assessment was developed with guidance from the Wisconsin Department of Natural Resources based on approaches used in other CWPP planning processes. The risk assessment evaluated wildfire risk by analyzing four key elements or "layers" of fire information. The four elements were hazard, risk, values, and protection capability.

The Towns of Big Flats and Monroe were evaluated by mapping each element to determine the areas of the towns that are most at-risk based on each of the four elements. The hazard element depicts the vegetation fire hazards (see Fire Hazard, Map 5); the risk element displays the locations and causes of past fire occurrences (see Fire Locations and Causes, Map 6); the values element displays the location of structures and critical and significant facilities and infrastructure (see Critical / Significant Facilities, Map 7); and the protection capabilities element displays the location of firefighting infrastructure and facilities (see Protection Capability, Map 8).

Each of the four elements impacts the severity, frequency, or likelihood of a wildfire occurrence in different ways. Each data layer was analyzed and displayed using Geographic Information System (GIS) mapping. The GIS maps of each of the four elements were assessed by the CWPP Planning Committee and each planning unit was quantifiably ranked based on the risk level committee members interpreted from the map. Values were compiled for each element and the planning units were ranked based on the average risk value calculated for each element.

**Table 8: Big Flats/Monroe CWPP  
Risk Assessment Analysis Ranking Results**

*A relative scale of High (3), Medium (2) or Low (1) is used to grade each planning unit for each of the four risk factors.*

<b>Fuel Hazard</b>	
<i>Planning Unit</i>	<i>Level of Hazard</i>
1. Lake Zone	High
2. South Monroe	High
3. NW Big Flats	High
4. Dead Horse Cr.	High
5. Trout Valley	High
6. East Carter Cr.	High
7. NE Big Flats	High

<b>Risk of Fire Occurrences</b>	
<i>Planning Unit</i>	<i>Level of Risk</i>
1. Lake Zone	Med
2. South Monroe	High
3. NW Big Flats	Low
4. Dead Horse Cr.	High
5. Trout Valley	High
6. East Carter Cr.	Med
7. NE Big Flats	Low

<b>Critical/Significant Facilities</b>	
<i>Planning Units</i>	<i>Level of Potential Loss</i>
1. Lake Zone	High
2. South Monroe	Med
3. NW Big Flats	Low
4. Dead Horse Cr.	High
5. Trout Valley	High
6. East Carter Cr.	Low
7. NE Big Flats	Low

<b>Protection Capability</b>	
<i>Planning Units</i>	<i>Level of Risk</i>
1. Lake Zone	High
2. South Monroe	Low
3. NW Big Flats	High
4. Dead Horse Cr.	Med
5. Trout Valley	Low
6. East Carter Cr.	High
7. NE Big Flats	High

***Assessment Weighting:***  
***Fuel Hazard 50%***  
***Past Occurrences 10%***  
***Facilities 20%***  
***Protection Capability 20%***

<b>Overall Risk Assessment</b>	
<i>Planning Unit</i>	<i>Overall Risk (Score)</i>
1. Lake Zone	HIGH (2.9)
4. Dead Horse Cr.	HIGH (2.7)
5. Trout Valley	HIGH (2.6)
6. East Carter Cr.	HIGH (2.5)
2. South Monroe	HIGH (2.4)
3. NW Big Flats	HIGH (2.4)
7. NE Big Flats	HIGH (2.4)

***Risk Score Ranges***  
***Low 1.0 - 1.6***  
***Medium 1.7 - 2.3***  
***High 2.4 - 3.0***



The CWPP planning committee selected a weighting to be applied to each element, as some of the elements will have a greater influence on wildfire occurrence. This weighting was then applied to the ranked values of each of the four elements and averaged together to derive an overall risk assessment ranking based on the four elements combined. The resulting risk assessment defines the high fire risk areas for prioritization of treatment and resources. Figure 2 displays the ranking results for each element with the committee's averaged results. The weighting of each element and the compiled risk assessment results are also displayed.

### **Risk Assessment Mapping**

Multiple data sets went into the mapping of the four element layers. The following information provides a summary of the data that went into mapping each of the four elements.

#### **Hazard**

The hazard element map (see Map 5) involved an assessment of fuel hazard mapping obtained with the assistance of the US Forest Service (USFS). The USFS did extensive analysis to create a fire hazard map for parts of the northern lake states, which included the northern half of Wisconsin. Based on their experience with that project, Forest Service staff assisted the NCWRPC with creating a fire hazard map for the Big Flats/Monroe study area. Existing Landfire fire behavior fuel models and WISCLAND land cover data were used to assign hazard ratings to the map.

#### **Fire Location & Causes 1985-2005 (Risk)**

The risk element map (see Map 6) involved an assessment of Wisconsin Department of Natural Resources data of wildfire occurrences in the Towns of Big Flats and Monroe from 1985 to 2005.

#### **Structures & Significant/Critical Facilities and Infrastructure (Values)**

The values element map (see Map 7) involved an assessment of the location of structures and their densities in each planning unit, along with the location of significant and critical facilities and infrastructure and their distances from each planning unit. The structure data came from Adams County Land Records and the location of significant and critical facilities and infrastructure came from various sources detailed below for each significant and critical facility and infrastructure type.

*Structures* - Structures include primary residences such as single-family and multi-family houses, and mobile homes; and commercial, industrial, and institutional/governmental facilities. This data was obtained from Adams County's Land Records Department.

*Significant/Critical Facilities and Infrastructure* - Significant/critical facilities and infrastructure include dry hydrants, water pickup sites, communication facilities, institutional/governmental facilities including schools, gas pipelines and substations, electric transmission lines and substations, fire departments, natural gas facilities, recycling centers, campgrounds, and historic sites.

The locations of transmission lines were obtained from ATC and historic sites were obtained from the Wisconsin State Historical Society. The delineation of gas pipeline and the sites for the town halls, fire stations, and other town facilities were obtained from the CWPP Planning Committee. All other significant and critical facilities and infrastructure information was obtained from Adams County and NCWRPC land use inventories.

### **Protection Capability**

The protection capability element map (see Map 8) involved an assessment of the location of fire departments and water pickup sites in relation to each planning unit.

*Fire Departments* - The fire department data was obtained from the CWPP Planning Committee.

*Dry Hydrants* – Dry hydrants are designated locations where a fire suppression truck or pumper can draw water. Dry hydrants provide all-season access. Locations were obtained from the CWPP Planning Committee and WDNR records.

*Water Pickup Sites* - Water pickup sites are designated locations where a fire suppression truck or pumper can access a water source. Water pickup sites may not provide all-season access. Water pickup site locations were obtained from the CWPP Planning Committee and WDNR records.

## **CHAPTER 4: MITIGATION STRATEGIES**

This chapter describes wildfire mitigation strategies including:

- Treatment of Hazardous Fuels
- Treatment of Structural Ignitability
- Emergency Preparedness
- Protection Capability
- Wildfire Prevention

### **TREATMENT OF HAZARDOUS FUELS**

Hazardous fuels reduction is an important element in mitigating wildfire risk. Fuels reduction should be prioritized around high density housing areas on both public and private lands. Fuels reduction may include targeted timber harvests or thinning, chipping projects, or creating buffer zones or buffer strips where forested tracts come in contact with high density housing areas.

Private homeowners should be encouraged to follow recommendations for the home ignition zone. Subdivisions in high hazard forested areas are especially vulnerable due to the close proximity of homes to one another as well as surrounding vegetation. These residents should be encouraged to participate in the Firewise Community USA program in order to facilitate the reduction of hazardous fuels.

Throughout the Towns, areas of insect/disease infestation damage or storm damage should be addressed as needed as well as areas that have simply accumulated a significant fuel load over time. The long-term impact of the extended drought conditions should be monitored. Slash from power and rail line trimming should also be addressed.

#### **Firewise Communities Program**

The Firewise Communities Program is a national multi-agency program that promotes partnerships between community leaders, homeowners, planners, developers and others to promote wildfire preparedness before a fire starts. The Firewise program emphasizes local community responsibility for designing and maintaining safe communities through land use planning, mitigation activities, collective decision-making and effective response.



The WDNR has a lot of information and a great number of resources and links on Firewise at <http://dnr.wi.gov/forestry/fire/prevention/firewise/index.htm>. Additional Firewise information can be found at <http://www.firewise.org/>.

## **TREATMENT OF STRUCTURAL IGNITABILITY**

While there are numerous factors that contribute to homes and communities being at risk to loss from wildfires, including hazardous fuel conditions, structural ignitability is arguably the most critical element to home survivability during a wildland-urban interface fire. Structural ignitability is the susceptibility of a structure to catching fire. Although some building construction elements can require a significant investment on the part of property owners, many structural ignitability factors are easily mitigated with little time and expense to homeowners.

This section of the plan will recommend treatment methods to mitigate structural ignitability including ways to modify home construction and the surrounding vegetation to decrease the susceptibility to ignition.

### **Building Codes/Permits**

The State of Wisconsin requires its Uniform Dwelling Code (UDC) to be enforced in all municipalities. This code applies to all new one- and two-family dwellings built today and renovations or additions to dwellings built since June 1, 1980.

Since building requirements are established by the UDC, little opportunity exists to influence the building code to conform to Firewise guidelines. However, the Towns can work with Adams County to use the building permit process as an opportunity to provide wildfire educational materials to the builder at the time the permit is issued.

Keep in mind that ordinary maintenance repairs are not considered structural repairs, modifications, or additions. Therefore, a building permit is not required for non-structural repairs such as replacement of doors, windows, roofing, or siding. These modifications offer the best opportunities to alter structural ignitability. The Towns should work to come up with methods to educate the public when undertaking such repairs.

### **Land Use Zoning Restrictions and Permits/Shoreland Zoning**

Neither the Town of Big Flats nor the Town of Monroe has general zoning. Both towns are also subject to county shoreland zoning administered by the Adams County Zoning Department.

To protect Wisconsin's lakes and rivers, people who own land and forests along shorelines are required to follow rules governing how far structures must be set back from the water's edge, the removal of trees from the shorelands, and other activities that could affect water quality and habitat. Firewise recommendations do not supersede zoning regulations. Therefore, whenever someone is planning to erect a structure or alter the land in some way, such as cutting trees, grading soil, etc., they should contact the zoning administrator to determine permit requirements and zoning restrictions.

The Towns should consider working with Adams County to identify standards for Firewise building materials and landscaping, and to amend the zoning ordinances to incorporate these standards.

### The Home Ignition Zone

The home ignition zone is defined as the home and the area around the home extending out 100-200 feet, see Figure 4. This area can extend out to 200 feet if a home is on a steep slope or is in an area of heavy fuels, such as a pine forest or plantation. If properly managed with enough space and modified vegetation, this area can prevent fire from spreading directly to buildings and act as a fuel break and improve the chance of a home surviving a wildfire. It is important for homeowners to be aware of steps they can take on their property to reduce their risks. There are several helpful publications available to homeowners as well as the potential opportunity to have a home ignition zone assessment conducted by an expert.

### Recommendations for the Home Ignition Zone

The goal is to have short vegetation with high moisture content in the area within 30 feet of structures. If modified properly, this area can keep low intensity surface fire from reaching structures and provide a relatively safe area for firefighters to work in. The area around structures should be kept mowed short, and raked free of fallen leaves and needles. Plantings should be carefully spaced and have fire resistant qualities. Deciduous plants, shrubs, and trees are generally more fire resistant than evergreens. Tree limbs should be pruned back at least 10 feet from all structures and conifers should be pruned up 6 to 10 feet from the ground.



Fuel breaks can be created by incorporating gravel, rock, brick, paving, or a water feature into landscape design. This is especially important within 5 feet of buildings. Nothing flammable should be placed or allowed to grow in this area. Firewood and other flammable materials (such as stacks of building materials, gasoline containers, and propane tanks) should be kept at least 30 feet from the home, garage, and sheds.

**Figure 3: The Home Ignition Zone**

In the area 30 to 100 feet beyond structures, the goal is to maintain space between shrubs and trees and remove lower tree branches. Trees in this zone should be spaced so their branches are at least 10 feet apart. Taller trees should have all limbs pruned six feet up from the ground. This greatly reduces the chance of grass fires (surface fires) spreading into the treetops (crown fires) and then moving to adjacent trees. All dead or dying limbs

should be removed throughout the tree canopy and dead, dying, and diseased trees should be removed from the area.

### **Fire Resistant Plants**

Even though some plants are marketed as fire resistant, all plants can burn under dry conditions. In general, plants that are low growing, open rather than densely branched, and low in resin content should be used in landscaping in high-risk areas. Junipers, pines, spruce, and fir are resinous and highly flammable. Landscape management including landscape design, plant placement, pruning, irrigation, and clean up have a greater impact on whether a plant ignites than the species. Maintenance of landscape plants is important to fire safety.

### **Maintenance**

Roofs, rain gutters, and decks are natural traps for leaves, pine needles, and embers from a fire. These areas should be kept free of all material that could allow an ember to smolder and start a fire. Flammable materials and debris should never be allowed under decks and overhangs. The first 3 to 5 feet around structures and wooden fences should be kept free of all vegetation, living and dead. This area can instead be filled in with decorative stone or other non-flammable material.

### **Building Materials**

Perhaps the best protection against the loss of a home to wildfire can be found in the building materials used in home construction. The materials used, whether building, remodeling, or retrofitting can make a difference in how well a home withstands both the potential "direct threat" of flames and the "indirect threat" of flying embers.

Roofs - The roof is the most exposed portion of the home's exterior and the most at risk from flying embers. Most homes lost during wildfires are due to embers and flames igniting combustible roofs. Roofs near any wildland area should be constructed of noncombustible materials such as composition shingles, tile or slate, or aluminum or steel. If it is not economically feasible to replace an existing wood shake roof, there are commercially available fire retardant treatments that may help slow the spread of a potential ignition or delay it. All roofs should be maintained to be free of accumulations of pine needles, leaves, or other material that may burn.

Decks and Fences - Any structure attached to a house is considered to be part of the house itself and is treated as the main house. The very nature of wooden decks (usually attached to the house and raised off the ground) makes them a fire concern. Decks elevated off the ground should be enclosed around the bottom with no larger than ¼-inch wire mesh screening to prevent embers from being trapped underneath.

Areas where the deck attaches to the house can be natural traps for leaves, pine needles, and embers from a fire. These areas should be kept clean and free of all material that could allow an ember to smolder and start a fire.

Wood fences can be highly flammable and are often attached to the house. For this reason, they should be avoided or at least well maintained. Vegetation that may ignite and hold a flame against the fence should be trimmed back or removed. There are some commercially available fire retardants that may help prevent or slow ignition of a fence. Consider separating the fence from the house with non-combustibles, such as metal, brick, or stone.

Siding - Siding should be constructed of fire-resistant materials. When a home is being built, added on to, or re-sided, fire-resistant materials such as stucco or masonry, or other modern fire-resistant products should be considered for use. Some siding materials, such as vinyl, will soften and melt in the heat of a wildfire and allow flying embers entry to attics or crawl spaces.

Windows - Windows can fail and provide openings for fire to get inside of a house. When building, remodeling, or replacing windows, the following considerations should be taken into account:

- Single-paned glass can break relatively easily from radiant heat or from windblown debris. Multi-paned windows will generally protect better against a wildfire.
- Reducing the size (square feet) of windows exposed to wildfire will reduce breakage. Smaller panes of glass will generally hold up better against a wildfire than will larger panes of glass.
- Tempered glass provides the best protection from high heat.

Eaves and Vents - Eaves can be a trap for firebrands and allow an ignition point up under a roof. For this reason, eaves should be enclosed or boxed. Eave vents, although necessary in home construction, can provide access into a home for flying embers. Therefore, they should be covered with a screen having a mesh opening of not more than 1/8 inch.

Rain Gutters - Rain gutters present a maintenance concern. They can be natural traps for embers to land, settle, and continue smoldering. Because of this, gutters should be kept clean and free of all accumulations of leaves, pine needles, or other material that could be ignited by embers.

Chimneys - Chimneys are both a construction and maintenance concern and present a risk of ignition from both inside and outside the home (chimney fires can cause a house fire: sparks from the chimney can ignite roofs and wildland fuels). Chimneys should be kept clean and covered with a mesh screen spark arrester to prevent firebrands from flying into the home and embers from flying out. This is a particular concern if the roof is constructed of flammable material.

## **EMERGENCY PREPAREDNESS**

### **Evacuation**

Initial safety concerns dictate that evacuation plans receive a high priority during any large fire. WDNR Incident Management Team training includes evacuation as part of simulation exercises. Further planning and training in cooperation with fire agencies, law enforcement, and disaster relief agencies would be beneficial.

Moving a large number of people out of concentrated subdivisions or areas with limited ingress and egress can be a problem during a large forest fire. Evacuation problems can develop when roads are too narrow or in disrepair and do not allow efficient flow of emergency responders in and residents out. Problems also exist when roads are blocked by downed power lines, the direction of fire movement blocks escape routes, or visibility is reduced due to smoke.

## **PROTECTION CAPABILITY**

### **Access**

Firefighters cannot protect property that they are unable to access. Roads leading to, through, and around subdivisions and isolated homes should be designed with emergency vehicles and two-way traffic in mind. Roads should be wide enough to handle both emergency vehicles entering the area, as well as other traffic leaving. Communities and local fire departments should continually educate and remind homeowners of the importance of having adequate access to their properties for emergency vehicles.

#### **Suggested Recommendations:**

- Road grades should not exceed ten percent and curves should be gentle and wide enough for large emergency vehicles to get around them.
- Road surfaces should be stable enough to support heavy equipment.
- Bridges should be constructed to accommodate the load of the largest apparatus typically used to respond to that location.
- Cul-de-sacs should have a 50-foot radius to allow emergency vehicles to maneuver and turn around.
- Turnouts large enough for heavy emergency vehicles should be constructed along one-way roads.
- Vegetation should be trimmed back to create a buffer area/firebreak along both sides of roads.
- Driveways should be at least 12 feet wide with 14 feet of overhead clearance. Driveways longer than 150 feet or those with sharp curves should be closer to 20 feet wide. If a driveway is longer than 300 feet, it should provide a turnout or turnaround for fire trucks. Locked or closed gates are discouraged.
- All roads and addresses should be clearly marked. Road and street signs, and fire number markers should be standardized, easy to read, and maintained in a readable condition using non-combustible materials. Addresses should be easily visible from the road.



## **WILDFIRE PREVENTION**

Humans cause the vast majority of wildfires in Wisconsin. Therefore, it is recommended that communities take advantage of opportunities to educate community members on the local causes of wildfires, burning regulations, alternatives to burning including information on local brush drop-off sites, and the danger of wildfire in the area.

## CHAPTER 5: IMPLEMENTATION

Implementation of the Big Flats - Monroe CWPP focuses on intermediate range needs for the next five years through priority mitigation projects selected by the towns. The Mitigation Action Plan identifies priority mitigation projects that each community will work to accomplish as well as when it should be done and who is responsible for overseeing the project. Projects in the Mitigation Action Plan will better prepare the area for the threat of wildfire.

The CWPP Planning Committee intends to meet quarterly or as needed to review the Mitigation Action Plan and work on implementation. Regular reviews will continue on an annual basis with complete plan updates occurring every five years.

<b>Category</b>	<b>Big/Flats Monroe CWPP Projects</b>	<b>Responsible Party</b>	<b>Timeline</b>
Education	Post wildfire awareness signs seasonally in appropriate locations.	Towns of Big Flats & Monroe	2010 and on-going
Protection	Identify location for water access in northeast Kennedy Waters. Explore opportunity to cooperate with Town of Rome (Planning Unit 1 in Town of Monroe).	Big Flats Fire Department	2010-2011
Protection	Purchase and install a sign at the entrance to private roads which lists all fire numbers located on that private road (Planning Units 1, 2, and 4).	Towns of Big Flats & Monroe	2010-2011
Education	Mail a Burning News newsletter to every taxpayer.	Towns of Big Flats & Monroe; Big Flats Fire Department; WDNR	2010-2011
Education	Find or create a good educational publication related to the importance of driveway access, including the need to maintain vegetation along the driveway.	Towns of Big Flats & Monroe; Big Flats Fire Department; WDNR	2011-2012
Education	Develop list of homeowner associations contact information. Promote recommendations for the home ignition zone and Firewise Communities/USA program (Planning Units 1 & 2 in Town of Monroe).	Town of Monroe; WDNR	2011

Education	Provide information on Firewise recommendations at annual meeting between Wisconsin River Power Company and subdivisions of Petenwell Landing, Petenwell Shores and Kennedy Waters (Planning Unit #1 in Town of Monroe).	Wisconsin River Power Company; WDNR; Town of Monroe	2010 and on-going
Education	Offer home ignition zone assessments in Planning Units 4 & 5 (Big Flats).	Town of Big Flats; WDNR	2012
Protection	Continue policy of widening woods roads when thinning stands in order to provide better access for firefighting as well as to provide a firebreak (Planning Units 2, 3, 4 in Town of Big Flats).	Plum Creek Timber	2010 and on-going
Enforcement	Ask Adams County Planning & Zoning Director to direct people requesting building permits back to Town Clerks for driveway permits.	Towns of Big Flats & Monroe	2012 and on-going
Enforcement	Ask Town Clerk to hand out copy of driveway ordinance with driveway permit.	Towns of Big Flats & Monroe	2012 and on-going
Enforcement	Appoint or hire someone to oversee enforcement of driveway ordinance.	Towns of Big Flats & Monroe	2013

## GLOSSARY

### A

**Aerial Fuels:** All live and dead vegetation in the forest canopy or above the surface fuels, including tree branches, twigs and cones, snags, moss, and high brush.

**Agency:** Any federal, state, county, or city organization participating with jurisdictional responsibilities.

### B

**Biomass (includes small-diameter wood):** The material from trees and woody plants, including limbs, tops, needles, leaves, and other woody parts, grown in a forest, woodland, farm, rangeland, or wildland urban interface environment, that are the by-products of forest management, ecosystem restoration, or hazardous fuel reduction treatments.

**Biomass Utilization:** The harvest, sale, offer, trade, and/or use of woody biomass to produce a full range of wood products. These products include timber, engineered lumber, paper and pulp, furniture and value-added commodities, as well as bio-energy, bio-fuels (ethanol and diesel), and bio-based products (plastics and solvents).

**Brush:** A term that refers to dead woody vegetation on the forest floor. It is also referred to as “slash”.

### C

**Chipping:** Reducing wood related material by mechanical means into small pieces to be used as mulch or fuel. Chipping and mulching are often used interchangeably.

**Crown Fire:** The movement of fire through the crowns of trees or shrubs more or less independently of the surface fire.

### D

**Dead Fuels:** Fuels with no living tissue in which moisture content is governed almost entirely by atmospheric moisture (relative humidity and precipitation), dry-bulb temperature, and solar radiation.

**Debris Burning Fire:** A fire spreading from any fire originally set for the purpose of clearing land or for rubbish, garbage, range, stubble, or meadow burning.

**Defensible Space:** An area either natural or manmade where material capable of causing a fire to spread has been treated, cleared, reduced, or changed to act as a barrier to an advancing wildland fire. In practice, “defensible space” is defined as an area a minimum of 30 feet around a structure that adequately prepared for wildfire.

**Detection:** The act or system of discovering and locating fires.

**Duff:** The layer of decomposing organic materials lying below the litter layer of freshly fallen twigs, needles, and leaves immediately above the mineral soil.

## E

**Escape Route:** A preplanned and understood route firefighters take to move to a safety zone or other low-risk area, such as an already burned area, previously constructed safety area, or a natural rocky area that is large enough to take refuge in without being burned. When escaped routes deviate from a defined physical path, they should be clearly marked (flagged).

**Emergency Burning Restrictions:** Under these conditions outdoor burning of any kind including burning in barrels, debris piles, grass or wood areas, campfires, using fireworks, smoking outdoors or disposing of matches, ashes or charcoal briquettes into the outdoors is prohibited as declared by the Secretary of the DNR.

## F

**Fire Behavior:** The manner in which a fire reacts to the influences of fuel, weather, and topography.

**Fire Line:** A control line that is scraped down to mineral soil.

**Fire Intensity:** A general term relating to the amount of heat energy released by a fire.

**Fire Perimeter:** The entire outside edge of the fire.

**Fire Season:** 1) Period(s) of the year during which wildland fires are likely to occur, spread, and affects resource values sufficient to warrant organized fire management activities. 2) A legally enacted time during which burning activities are regulated by state or local authority.

**Fire Weather:** The combined atmospheric elements that affect a wildland fire. This will include but not be limited to temperature, wind speed, and relative humidity.

**Firebrand:** Any source of heat, natural or man made, capable of igniting wildland fuels; flaming or glowing fuel particles that can be carried naturally by wind, convection currents, or gravity into unburned fuels. Also called “ember”.

**Firewise Community:** A community that receives national recognition for working to create a safer community in the face of the wildfire threat. The Firewise Community focuses on hazard fuel reduction and outreach to homeowners to promote individual responsibility for safer home construction and design, landscaping, and maintenance.

**Firefighting Resources:** All people and major items of equipment that can or potentially could be assigned to fires.

**Flare-up:** Any sudden acceleration of fire spread or intensification of a fire. Unlike a blow-up, a flare-up lasts a relatively short time and does not radically change control plans.

**Fine Fuels:** Fuels such as grass, leaves, pine needles, and some kinds of slash that ignite readily and are consumed rapidly when dry.

**Fuel:** Combustible material. This includes, vegetation, such as grass, leaves, ground litter, plants, shrubs, and trees, as well as man-made objects like boats, cars and homes.

**Fuel Break:** A natural or manmade change in fuel characteristics which affects fire behavior so that fires burning into them can be more readily controlled.

**Fuel Loading:** The amount of fuel present expressed quantitatively in terms of weight of fuel per unit area.

**Fuel Type:** An identifiable association of fuel elements of a distinctive plant species, form, size, arrangement, or other characteristics that will cause a predictable rate of fire spread or difficulty of control under specified weather conditions.

## G

**Ground Fire:** Fire that consumes the organic material beneath the surface litter ground, such as a peat fire.

## H

**Hazard Reduction:** Any treatment of a hazard that reduces the threat of ignition and fire intensity or rate of spread.

**Head of the Fire:** The most rapidly spreading portion of a fire’s perimeter. Usually the downwind or uphill side.

**Home Ignition Zone:** Includes the home and an area surrounding the home within 100 to 200 feet.

**Hotspot:** A particularly active part of a fire.

## I

**Incendiary Fire:** A fire willfully set by anyone to burn vegetation or property not owned by the perpetrator and without the consent of the owner or his agent (arson)

**Incident:** A human-caused or natural occurrence, such as wildland fire, that requires emergency service action to prevent or reduce the loss of life or damage to property or natural resources.

**Initial Attack:** The control efforts taken by resources which are the first to arrive at the scene to protect lives and property and prevent further expansion of the fire.

**Interoperability:** Connecting people, data and diverse systems. Interoperability in regard to wildfires often focuses on getting diverse communication systems connected so that communication can occur between cooperating agencies, command and tactical units, air and ground units, etc.

## L

**Ladder Fuels:** Fuels that provide vertical continuity between strata, thereby allowing fire to carry from surface fuels into the crowns of trees or shrubs with relative ease. They help initiate and assure the continuation of crowning.

**Litter:** Top layer of the forest, scrubland, or grassland floor, directly above the fermentation layer, composed of loose debris of dead sticks, branches, twigs, and recently fallen leaves or needles, little altered in structure by decomposition.

**Live Fuels:** Living plants, such as trees, grasses, and shrubs, in which the seasonal moisture content cycle is controlled largely by internal physiological mechanisms rather than by external weather influences.

## M

**Mutual Aid Agreement:** Written agreement between agencies and/or jurisdictions in which they agree to assist one another upon request, by furnishing personnel and equipment.

**Mutual Aid Box Alarm System (MABAS):** MABAS agencies, regardless of their geopolitical origin, are able to work together seamlessly on any emergency scene. All MABAS agencies operate on a common radio frequency and are activated for response through protocols developed to meet local risk needs. MABAS also provides mutual aid station coverage to a stricken community when their Fire/EMS resources are committed to an incident for an extended period.

## P

**Peak Fire Season:** That period of the fire season during which fires are expected to ignite most readily, to burn with greater than average intensity, and to create damages at an unacceptable level.

**Preparedness:** Condition or degree of being ready to cope with a potential fire situation.

**Prescribed Fire:** Any fire ignited by management actions under certain, predetermined conditions to meet specific objectives related to hazardous fuels or habitat improvement. A written, approved prescribed fire plan must exist.

**Prevention:** Activities directed at reducing the number of fires, including public education, law enforcement, personal contact, and reduction of fuel hazards.

## S

**Slash:** Debris left after logging, pruning, thinning, or brush cutting or natural events which may include logs, chips, bark, branches, stumps and broken understory trees or brush.

**Snag:** A standing dead tree or part of a dead tree from which at least the smaller branches have fallen.

**Spark Arrester:** A device installed in a chimney, flue, or exhaust pipe to stop the emission of sparks and burning fragments.

**Spot Fire:** A fire ignited in unburned fuels outside the perimeter of the main fire by firebrands or embers.

**Staging Area:** Locations set up at an incident where resources can be placed while awaiting a tactical assignment on a three-minute available basis. Staging areas are managed by the operations section.

**Structure Fire:** Fire burning any part or all of any building, shelter, or other structure.



**Suppression:** All the work of extinguishing or containing a fire, beginning with its discovery.

**Surface Fire:** A fire that burns surface fuels such as litter, debris, leaves and small vegetation.

## T

**Torching:** The ignition and flare-up of a tree or small group of trees, usually from the bottom to the top.

## W

**Wildfire (or wildland fire):** Any nonstructural fire, other than prescribed fire, that occurs in the wildland.

**Wildland-Urban Interface:** The area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

**APPENDIX A**  
**FUNDING OPPORTUNITIES**

---

## **STATE ASSISTANCE**

### **Forest Fire Protection Grant**

Forest Fire Protection (FFP) grants are available to increase forest fire protection and suppression capabilities through cooperative efforts with local fire departments and county fire associations as per s.917, 1997 Wisconsin Act 27, Stats.

Factors considered include:

1. Whether the fire departments serve in a WDNR organized fire protection area;
2. Whether fire departments respond to wildfires within their jurisdiction at no cost to the WDNR;
3. Whether fire departments have a majority of members meeting NFPA 1051 standards for firefighting training and;
4. Whether or not the fire department was awarded a FFP grant in the last funding cycle.

Fire departments that have executed a forest fire suppression agreement acceptable to WDNR are eligible to apply. County fire associations with a majority of the member fire departments having a forest fire suppression agreement with WDNR are eligible to apply. There is a 50 percent local match required. Eligible fire departments can receive a maximum grant award of \$10,000. Eligible county fire associations can receive a maximum grant award of \$25,000.

Wildland fire equipment is eligible in the following categories listed in priority order:

- Personal protective clothing
- Forest fire training
- Forest fire prevention projects
- Forest fire suppression equipment
- Dry hydrants
- Communications equipment
- Mapping equipment, maps, and GPS units
- Off road vehicles primarily used for forest fires including ATV's

A complete listing of eligible items can be found on the application web site. Applications are mailed to fire departments and county fire associations in late April. Applications must be returned to the WDNR by July 1 (unless otherwise provided for on the application) of the same year.

The FFP grant application packet is available online at <http://dnr.wi.gov/org/caer/cfa/lr/ffp/grants.html>.

For more information, contact Eileen Trainor, Financial Assistance Specialist at (608) 267-0848 or by email at [Eileen.Trainor@Wisconsin.gov](mailto:Eileen.Trainor@Wisconsin.gov).

### **Wisconsin DNR – Division of Forestry Hazard Mitigation Program**

Hazard Mitigation Program grants aim to decrease the probability of a catastrophic wildfire affecting a Wisconsin community. Through the National Fire Plan program, states are able to compete for grants to fund projects that meet the goals of the program. The WDNR Division of Forestry manages these funds through their Hazard Mitigation program. Projects fall under a few general categories: readiness, prevention, fuel breaks, and vegetation management. Communities with Community Wildfire Protection Plans are eligible to apply for these funds to conduct projects such as fuels reduction, access improvement, prescribed burning, and education. Smaller associations within the community (e.g. lake associations) are eligible to apply for funds to carry out projects such as chipping days, defensible space creation, education, and property assessments.

The application materials typically become available in October and are due in early January. For additional information or application materials, contact Jolene Ackerman at the WDNR Division of Forestry at [Jolene.Ackerman@wisconsin.gov](mailto:Jolene.Ackerman@wisconsin.gov) or (608) 267-7677.

### **FEDERAL ASSISTANCE**

#### **Assistance to Firefighters Grant Program**

The purpose of the Assistance to Firefighters Grant (AFG) Program is to award one-year grants directly to fire departments and nonaffiliated emergency medical services (EMS) organizations of a state to enhance their abilities with respect to fire and fire-related hazards. The primary goal is to provide assistance to meet fire departments' and nonaffiliated EMS organizations' firefighting and emergency response needs. This program seeks to support organizations that lack the tools and resources necessary to protect the health and safety of the public and their emergency response personnel with respect to fire and all other hazards they may face.

The application period typically runs from March 6 to April 7. Each application includes a scored narrative with four parts:

- Project Description
- Financial Need
- Cost/Benefit
- Operational Outcomes

More information can be found online at <http://www.firegrantsupport.com>, by calling the grant help desk of (866) 274-0960 or by email Dawn Vick at [dawn.vick@wisconsin.gov](mailto:dawn.vick@wisconsin.gov).

#### **Fire Prevention and Safety Grant Program**

The Fire Prevention and Safety (FP&S) grants are part of the Assistance to Firefighters Grants (AFG) and are under the purview of the Grant Programs Directorate in the Federal Emergency Management Agency. FP&S grants support projects that enhance the safety of the public and firefighters from fire and related hazards. The primary goal is to target high-risk populations and mitigate high incidences of death and injury. Examples of the types of projects supported by FP&S include fire prevention and public safety education

campaigns, juvenile fire-setter interventions, media campaigns, and arson prevention and awareness programs. In fiscal year 2005, Congress reauthorized funding for FP&S and expanded the eligible uses of funds to include Firefighter Safety Research and Development.

The application period is open from October 22 to November 30. More information can be found online at <http://www.firegrantsupport.com/fps/>, by calling the grant help desk at (866) 274-0960 or by email at [firegrants@dhs.gov](mailto:firegrants@dhs.gov).

### **Staffing for Adequate Fire and Emergency Response Grant Program**

Staffing for Adequate Fire and Emergency Response (SAFER) grant was created to provide funding directly to fire departments and volunteer firefighter organizations in order to help them increase the number of trained, “front-line” firefighters available in their communities.

The goal of SAFER is to enhance the local fire departments’ abilities to comply with staffing, response, and operational standards. Specifically, SAFER funds should assist local fire departments to increase their staffing and deployment capabilities in order to respond to emergencies whenever they may occur. Because of enhanced staffing, response times should be sufficiently reduced with an appropriate number of personnel assembled at the incident scene. In addition, the enhanced staffing should provide that all front-line/first-due apparatus of SAFER grantees have a minimum of four trained personnel to meet OSHA standards. Ultimately, a faster, safer, and more efficient incident scene will be established and communities will have adequate protection from fire and fire-related hazards.

The purpose of the SAFER grants is to award grants directly to volunteer, combination, and career fire departments to help the departments increase their cadre of firefighters. Ultimately, the goal is for SAFER grantees to enhance their ability to attain 24-hour staffing and thus assuring their communities have adequate protection from fire and fire-related hazards. The SAFER grants have two activities that will help grantees attain this goal:

1. Hiring of firefighters and
2. Recruitment and retention of volunteer firefighters.

The application period is open from July 30 to August 30. More information can be found online at <http://www.firegrantsupport.com/safer/>, by calling the grant help desk at (866) 274-0960 or by email at [firegrants@dhs.gov](mailto:firegrants@dhs.gov).

**APPENDIX B**  
**ANNUAL UPDATE FORM**

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**Community Wildfire Protection Plan for Towns of Big Flats and Monroe  
Annual Update Form**

NAME OF TOWN: \_\_\_\_\_

FORM COMPLETED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

STATUS OF PROJECT LIST:

(Explain the effort your community has made and describe successes/challenges faced.)

PROPOSED CHANGES TO PROJECT LIST:

PROJECTS PLANNED FOR NEXT PLANNING PERIOD:

ASSISTANCE NEEDED TO EXECUTE A SPECIFIC PROJECT:

**Project** (Reference the project list in the adopted plan): \_\_\_\_\_

Do you need help to develop a detailed **budget** for the project? Yes or No

Are you lacking **resources** to complete the project? Yes or No

Do you need **technical assistance**? Yes or No

Other assistance needed:

IMPROVEMENTS RECOMMENDED TO THE PLAN:

## **APPENDIX C PLAN MAPS**

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Map 1

# Locational Map

Town of Monroe & Big Flats  
Adams County CWPP



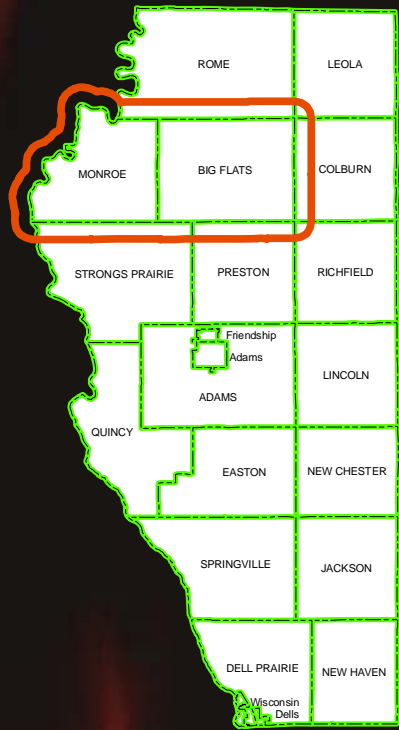
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Map 2  
**Ownership Map**  
 Town of Monroe & Big Flats  
 Adams County CWPP



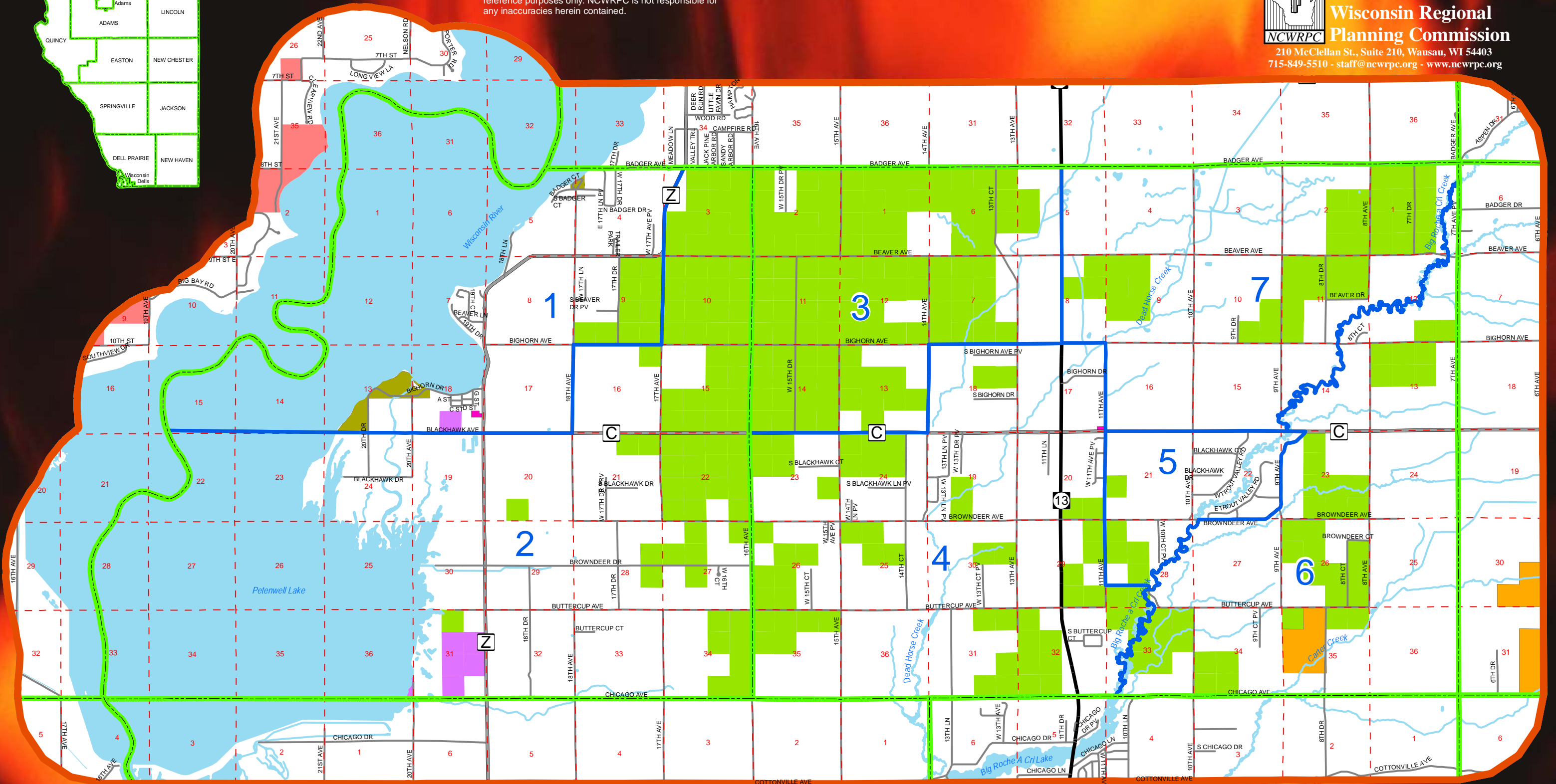
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Land Ownership			
	Minor Civil Divisions		Juneau County
	Section Lines		Adams County
	Planning Unit Boundaries		Private
	Planning Area		Town
	US Highways		WI DNR
	State Highways		PLUM CREEK TIMBERLANDS L P
	County Highways		WISCONSIN RIVER POWER CO
	Local Roads		



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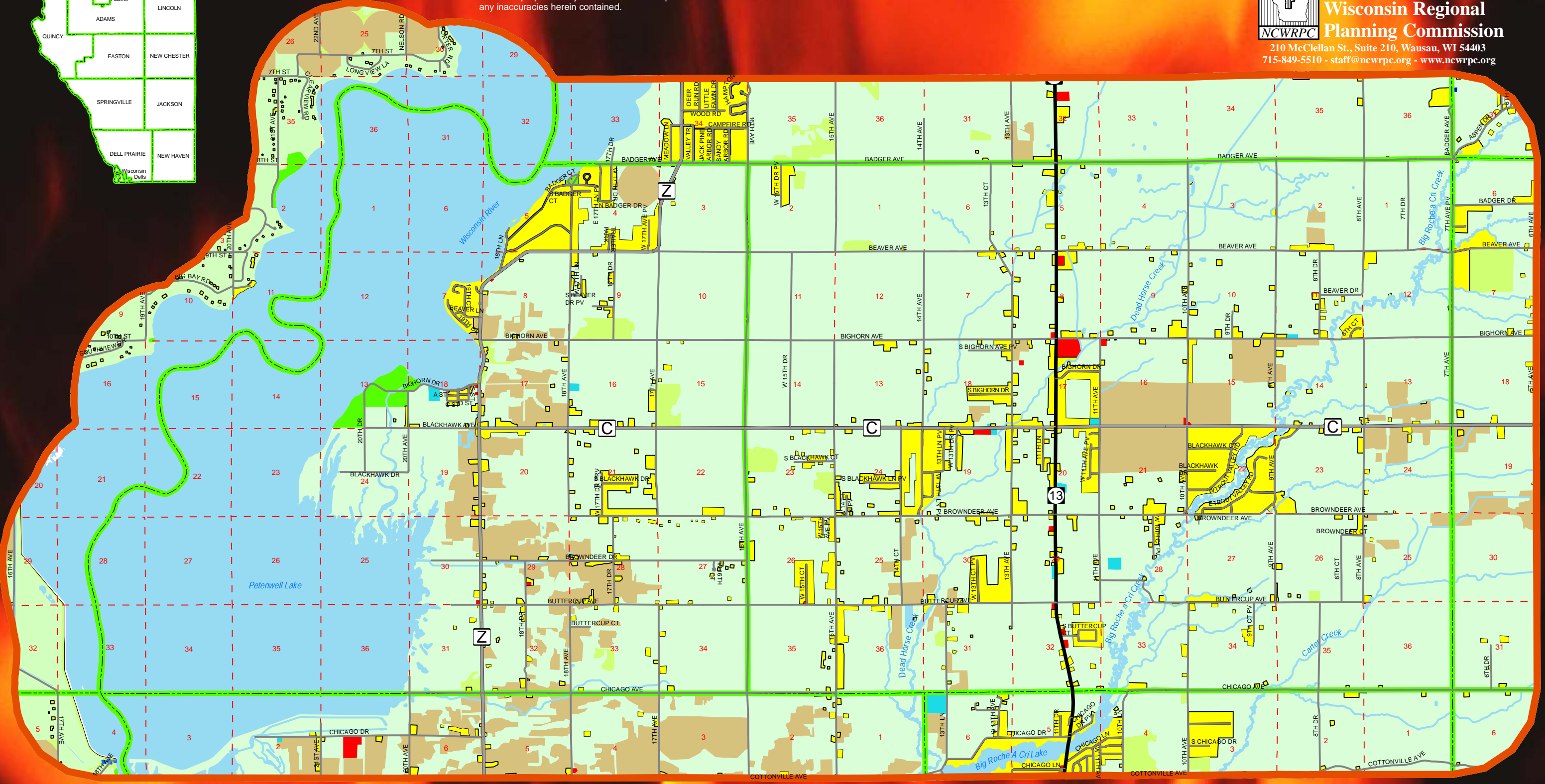
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Minor Civil Divisions	Governmental
Section Lines	Industrial
Planning Area	Multi-Family
US Highways	Open Lands
State Highways	Outdoor Recreation
County Highways	Residential
Local Roads	Transportation
Agriculture	Water
Commercial	Woodlands

# Map 3 Existing Generalized Land Use Town of Monroe & Big Flats Adams County CWPP



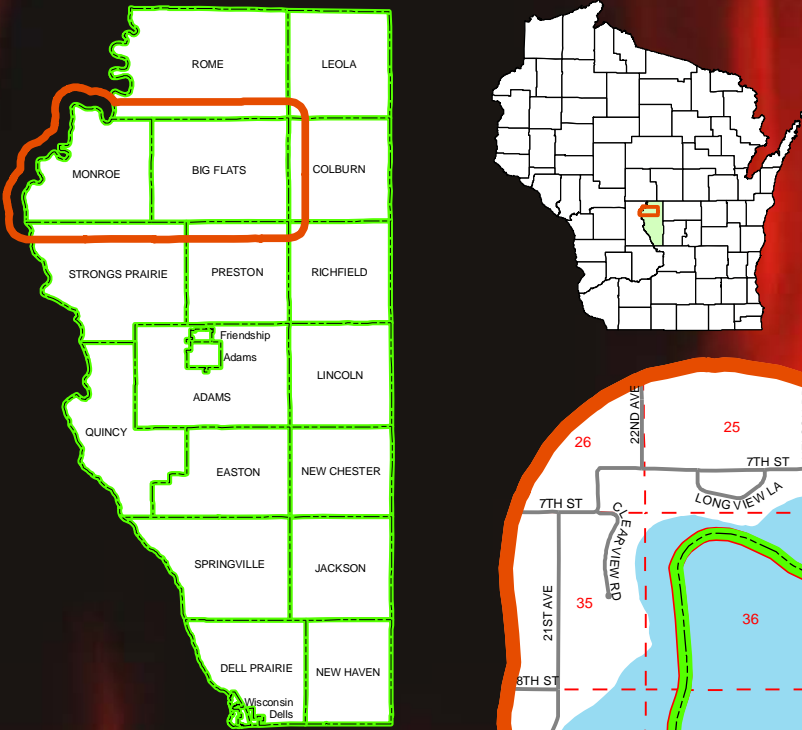
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# Planning Units Map

## Town of Monroe & Big Flats

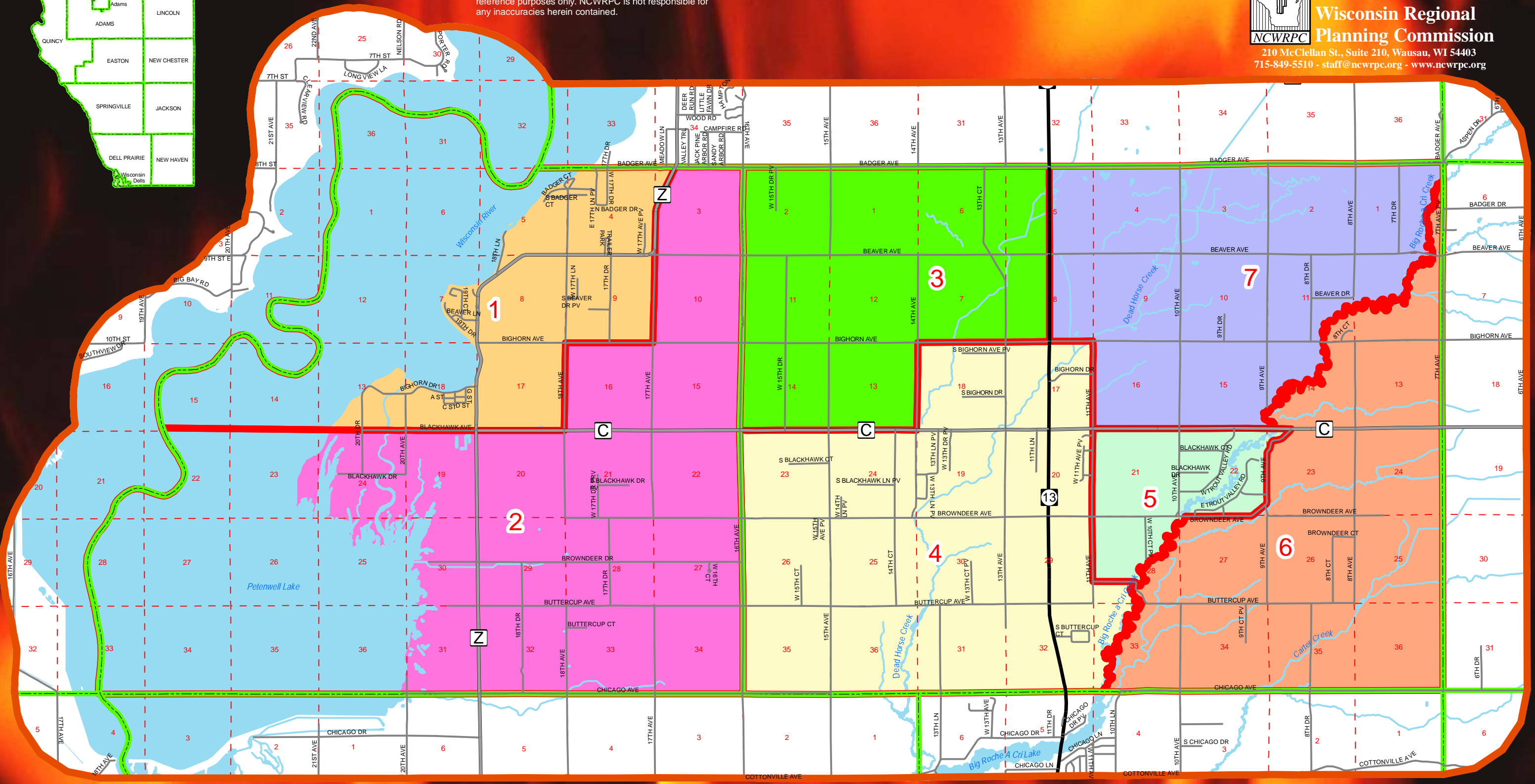
### Adams County CWPP



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	Minor Civil Divisions	<b>Planning Units</b>
	Section Lines	
	Planning Area	
	US Highways	
	State Highways	
	County Highways	
	Local Roads	

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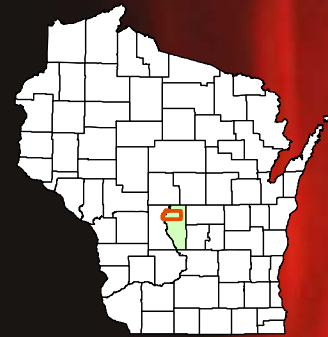
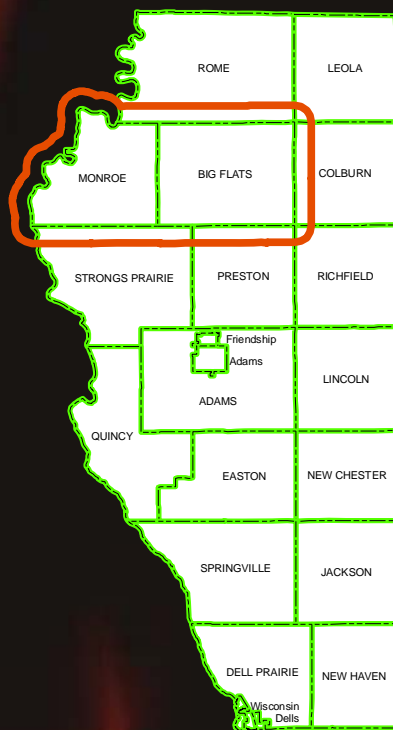
# Fire Hazard Rating

## Town of Monroe & Big Flats Adams County CWPP



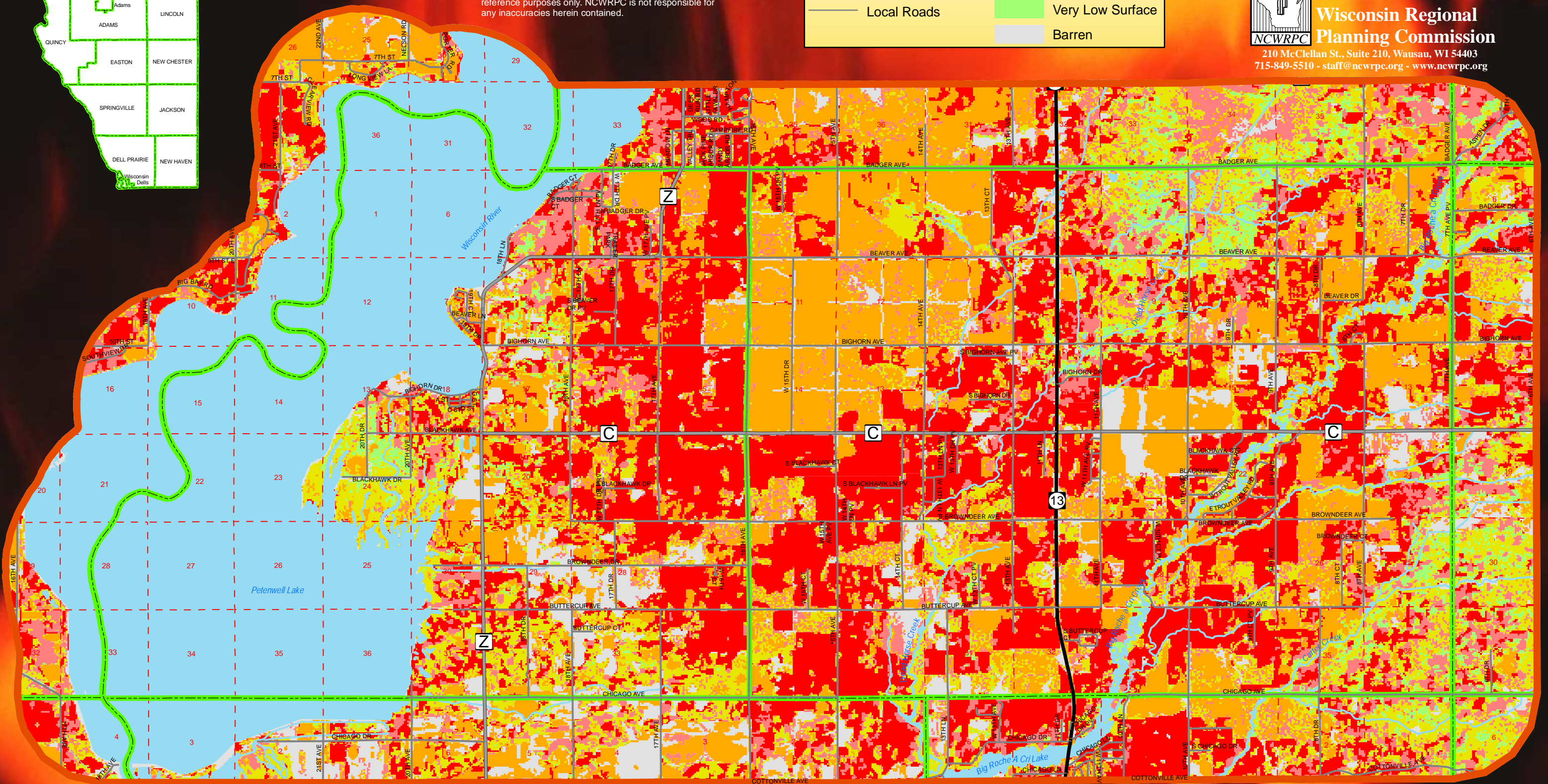
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Hazard Rating			
	Minor Civil Divisions		Crown
	Section Lines		Very High Surface
	Planning Area		High Surface
	US Highways		Moderate Surface
	State Highways		Low surface
	County Highways		Very Low Surface
	Local Roads		Barren





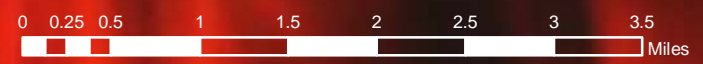
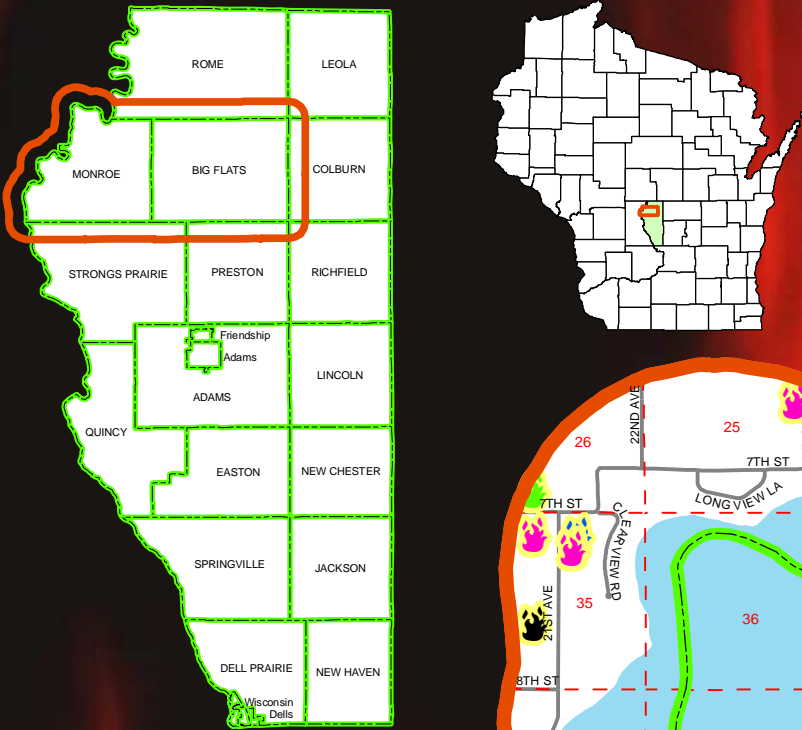
# Fire Locations & Causes 1985 - 2005

Town of Monroe & Big Flats  
Adams County CWPP



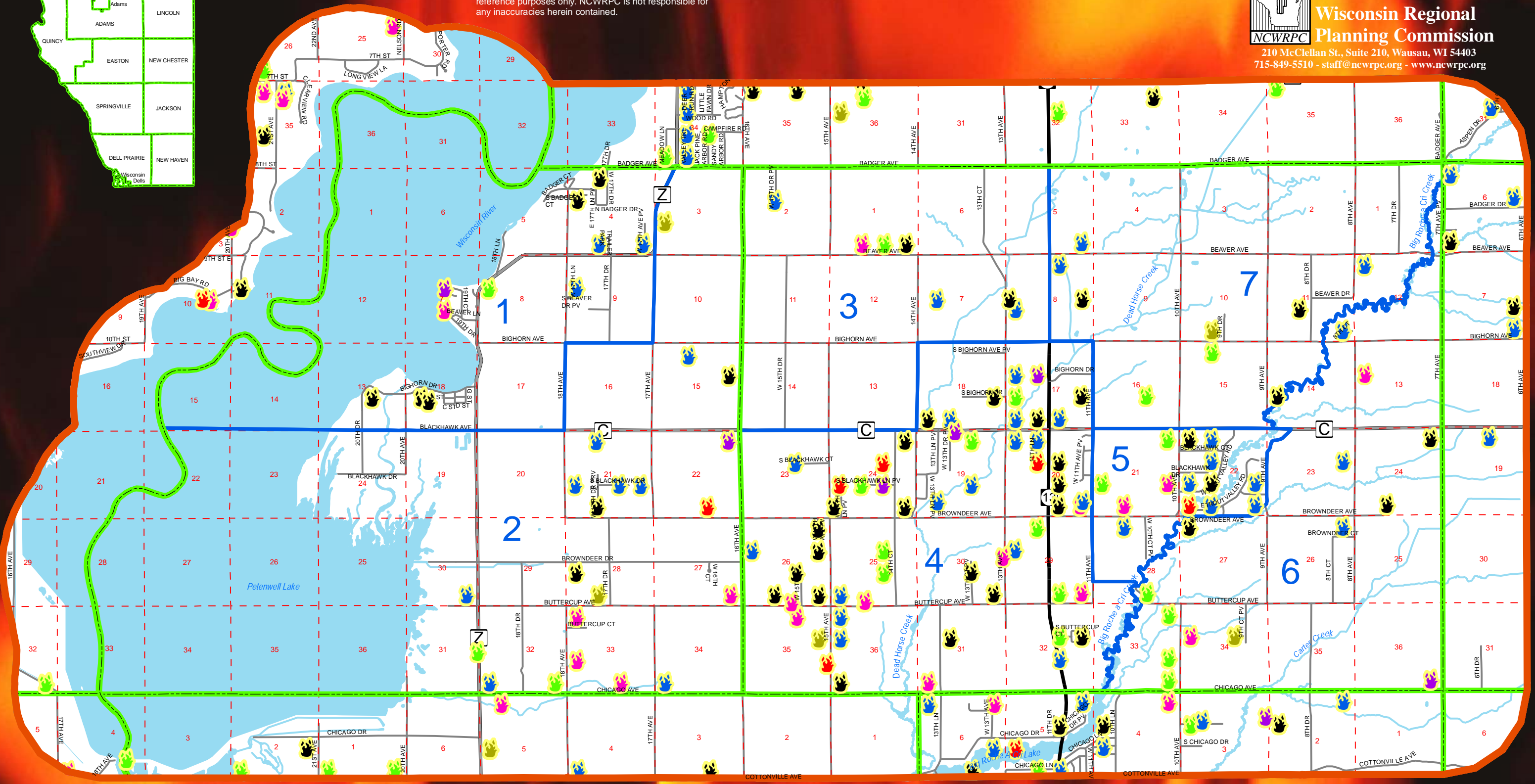
Prepared By:  
**North Central  
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- |  |                          |  |               |
|--|--------------------------|--|---------------|
|  | Minor Civil Divisions    |  | Campfire      |
|  | Section Lines            |  | Debris        |
|  | Planning Unit Boundaries |  | Equipment     |
|  | Planning Area            |  | Incendiary    |
|  | US Highways              |  | Lightning     |
|  | State Highways           |  | Miscellaneous |
|  | County Highways          |  | Smoking       |
|  | Local Roads              |  |               |







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	Minor Civil Divisions		Fire Station
	Section Lines		Former Landfill
	Planning Area		Landfill
	Planning Unit Boundaries		Town Hall
	US Highways		Transfer Site
	State Highways		County Campground
	County Highways		Private Campground
	Local Roads		Communication Towers
	Building Points		
	High Voltage Powerline		
	Substations		
	Pipeline		

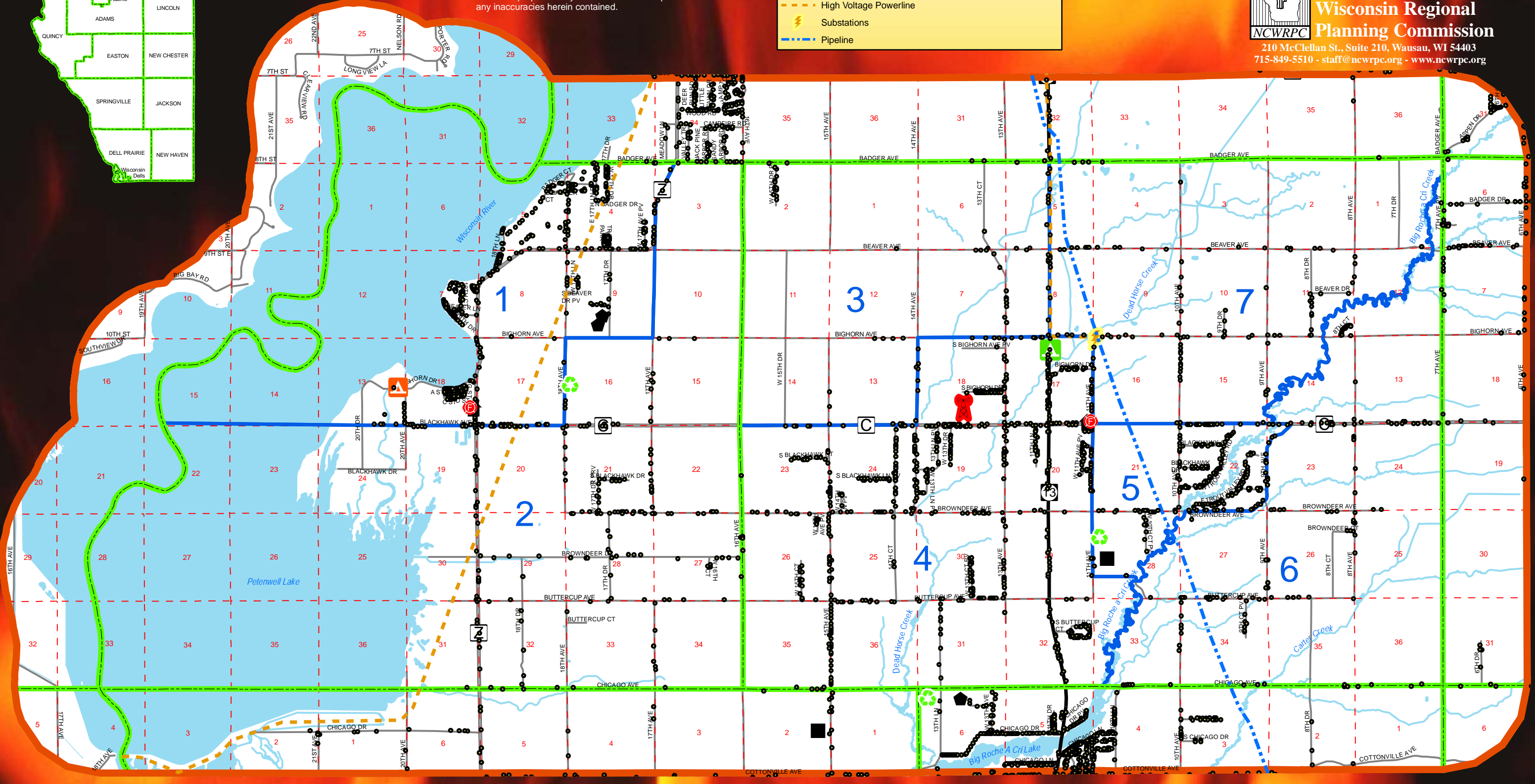
# Map 7 Critical / Significant Facilities

## Town of Monroe & Big Flats Adams County CWPP

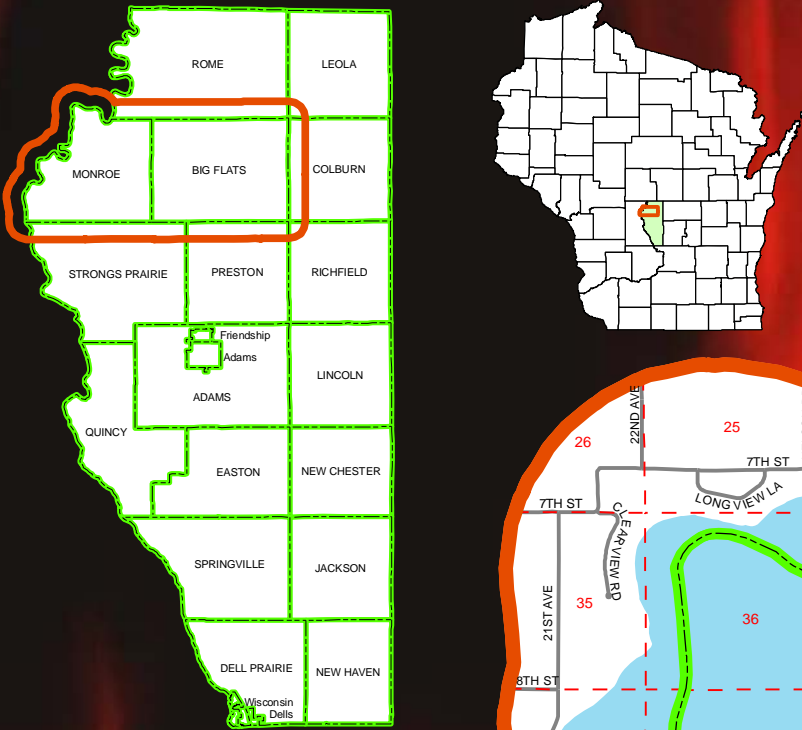


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# Protection Capability Town of Monroe & Big Flats Adams County CWPP



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- Minor Civil Divisions
- Section Lines
- Planning Unit Boundaries
- Planning Area
- US Highways
- State Highways
- County Highways
- Local Roads
- Draft Point
- Dry Hydrant
- Pressurized Hydrant
- Fire Station



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